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Original Research

Brief Report

Transforming Nutrition Security: Embracing Trauma-Informed Approaches for Community Resilience

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Transforming Nutrition Security: Embracing Trauma-Informed Approaches for Community Resilience

In 2013, I joined Leah's Pantry as a program manager after departing a rewarding position conducting garden-based food and nutrition after-school programming in a San Francisco public housing community. The after-school program aimed to help children eat more healthfully through cooking and gardening activities. While there were dietary improvements from their near-daily exposure to this programming, I wondered why the children who lived in this community seemed to struggle more with mood, self-regulation, and behavior. I observed these children experiencing a great deal of anxiety and tension around food, even healthy food, whenever it was served or was part of an activity. Many exhibited delayed socio-emotional development, and I often couldn't get through age-appropriate activities without significant challenges, undermining the effectiveness of my programming.

Having studied child development, I began to dive deeper into understanding the work of Dr. Bruce Perry, noted researcher on child trauma, and Dr. Bessel Van der Kolk, now almost a household name but unknown back in the early 2010s (Van der Kolk, 2025; Perry & Winfrey, 2021). I also became aware of Dr. Nadine Burke's clinic in the community I worked in. Dr. Burke eventually became California's surgeon general and is well-known for bringing the linkages between childhood adversity and poor health outcomes for children to the national stage (Burke Harris, 2015). An understanding of what happens to the mind and body from chronic exposure to toxic stress is the basis for Dr. Burke's treatment model.

The children I worked with often faced daily violence, poverty, neglect, frequent loss, and epigenetic trauma. Many of their developmental needs were being disrupted, and this profoundly affected them in physical and emotional ways. I concluded that the organization, and

my specific program, need to adjust expectations, approaches, and goals. I believed this was the best way to improve the health and well-being of the children we served and reach successful outcomes. Unfortunately, taking a trauma-informed perspective was not something my organization was ready to do.

I was pleasantly surprised when I joined Leah's Pantry and we were invited to conduct a trauma-informed community-food initiative with residents in a public housing community. This deep work, which took place over seven years, catalyzed our development of trauma-informed approach to nutrition security that drives our work today. At that time, the term trauma-informed was barely recognized outside of the psychotherapeutic world. I never imagined that trauma-informed approaches and trauma-informed nutrition security would be so widely incorporated into publicly-funded nutrition and community food security programs and that Leah's Pantry would spearhead that initiative. The adoption of a trauma-informed lens by so many health promotion agencies and entities has yielded many powerful insights and innovative interventions over the past 10 years.

Despite the adversarial times in community health promotion, or because of them, I believe we are primed to continue moving forward to create a more robust evidence base for the continued application of trauma-informed thinking to nutrition and physical activity interventions. The expertise and research I consulted when I began my inquiry about 15 years ago had already been well-established and has since been further validated and expanded. There are now scholars applying this lens directly to population-based behavior change interventions (Marks, et al. 2022). Even more promising, we are now using the term "trauma-informed" to not just refer to an understanding of "*what happened to you?"* as a result of trauma and adversity, but "*what happened to you so you were resilient?"* or "*what happened to set you on the path of*

recovery?" By applying the growing research on coping and flourishing in the face of distress and adversity to program design and implementation and studying the impact, we can keep advancing the development of impactful programs and initiatives for our communities. Our efforts should continue to increase access to services, drive collective engagement, foster a sense of aliveness, promote self-determination, and inspire self-mastery. Learning how to best achieve this through research and investigation can also transform our work and give us the tools to thrive in the current moment.

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Process Evaluation of Culturally Preferred Food Pilot for Arkansas Food Pantries and Farms

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Abstract

Background: Limited research documents how organizations implement programs to increase culturally preferred foods. This project explores organizational factors in implementing a cultural food preference pilot across food pantries and farms with specific attention to Hispanic and Marshallese culturally preferred foods.

Methods: Food pantry and farm partners were engaged through a low food security community of practice (i.e., a partnership with community-based organizations). Six partners were funded for seven months to grow and distribute culturally preferred foods. An evaluator conducted semi-structured interviews with partners which were recorded and transcribed. Transcripts were analyzed using rapid thematic analysis.

Results: Rapid thematic analysis revealed six themes: 1) frequent discussion about culturally preferred foods within organizations; 2) received positive feedback from clients; 3) incorporation of culturally preferred knowledge into other programming; 4) formed new partnerships with procurement and distribution sites; 5) identified sustainability concerns related to continuing to offer culturally preferred foods; 6) committed to continuing to grow culturally preferred foods.

Discussion: Findings can inform practitioners in food pantries and farms implementing interventions with culturally preferred foods and highlight the need to address sustainability concerns related to food access and cost to ensure long-term impact of such interventions.

Keywords: community of practice, culturally preferred foods, farmers, food insecurity

Process Evaluation of Culturally Preferred Food Pilot for Arkansas Food Pantries and Farms

The United States is expanding in its racial and ethnic diversity, a trend mirrored in Arkansas (U.S. Census Bureau, 2020). The Northwest Arkansas region, in particular, has a 29% racially and ethnically diverse population, with expectations that it will reach 32% by 2026 (Northwest Arkansas Council, 2022). A large number of Marshallese Pacific Islander and Hispanic immigrants and migrants fuels this racial and ethnic diversity. The region has the highest number of Marshallese in the continental U.S. (~16,000), and 17% of the population identifies as Hispanic (McElfish et al., 2021; U.S. Census Bureau, 2020). Increasing access to Marshallese culturally preferred foods is particularly important as U.S. military nuclear testing in the Republic of the Marshall Islands between 1946 and 1958 destroyed traditional food production and led to the proliferation of imported and processed foods in the Marshallese diet (Ahlgren et al., 2014). Limited employment opportunities, poor infrastructure, and increasing climate change have contributed to Marshallese persons moving to Arkansas in search of a more favorable cost of living (McElfish et al., 2015).

A shift in the food system is necessary to accommodate the region's increase in diversity. According to the Centers for Disease Control and Prevention, culturally preferred foods are safe and nutritious foods that align with the diverse tastes and needs of individuals arising from their cultural identity (Centers for Disease Control and Prevention, 2024). However, research has documented the lack of culturally preferred foods in retail and corner stores (Hearst et al., 2021). This lack of access may contribute to poor dietary intake and chronic diseases for minority populations, which are already at high risk for food insecurity (Cooksey-Stowers et al., 2018a; Levi et al., 2022).

Arkansas has the highest levels of food insecurity in the U.S., reaching 18.9% in 2023, compared to the national average of 13.5% (Rabbitt et al., 2024). The impact of low food security intensified during the COVID-19 pandemic, disproportionately affecting Hispanic and Marshallese residents in Arkansas, with food insecurity rates for Marshallese residents reaching as high as 80% (Anderson et al., 2022; Willis et al., 2022). In addition to federal food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC), the charitable food system of regional food banks and local food pantries helps procure and distribute free food to people experiencing low food security. Even when food-insecure individuals have access to food through the charitable food system, clients often report a lack of familiar foods that align with their cultural and medical preferences (Carle & Rosenberg, 2018; Long et al., 2022; Wright et al., 2019). Multiple food pantries and food banks nationwide have implemented programs to increase culturally preferred foods with varying degrees of success (Food Bank of the Rockies, n.d.; Leah's Pantry, n.d.-a).

While research has focused on staff perspectives on nutrition interventions and perceived preferences of clients, there is limited literature documenting how organizations implement programs to increase culturally preferred foods (Cahill et al., 2017; Cooksey-Stowers et al., 2018b). The current article aims to document the implementation and evaluation of a pilot project to increase equitable and inclusive access to culturally preferred foods in Arkansas. Due to the disproportionately high rates of food insecurity among Hispanic and Marshallese residents, this pilot focused on growing Hispanic and Marshallese culturally preferred foods on farms and distributing those foods at food pantries. This article is one of few that integrates the perspective

of farmers growing culturally preferred foods for distribution in food pantries (Bacon et al., 2024).

Methods

Food Insecurity Community of Practice

The University of Arkansas for Medical Sciences Institute for Community Health Innovation (hereafter the university team) was funded to implement the Food Insecurity Community of Practice (FI CofP). The FI CofP was comprised of 23 community-based organizations guided by a stakeholder advisory board of seven residents with knowledge of food insecurity and a national advisory board of five experts on food insecurity. The FI CofP had four goals: 1) increasing SNAP and WIC access; 2) evolving food recovery and distribution models; 3) increasing equitable and inclusive access to healthy foods; and 4) increasing the ability of organizations to operate as a coordinated body.

The FI CofP implemented three pilot projects across these four goals. This article focuses on the implementation and evaluation of the pilot project, which sought to increase equitable and inclusive access to healthy foods. The university team implementing and evaluating these projects has experience with community-based approaches to increasing healthy food access in a variety of settings, including faith-based organizations, farmers' markets, and food pantries (Long et al., 2021; Long et al., 2022; McElfish et al., 2020; Rowland et al., 2018; Silva et al., 2023). The university team uses a community-based participatory approach to guide their work with Hispanic and Marshallese communities (McElfish et al., 2021).

Participant Recruitment

Six partners were selected based on organizational capacity, previous experience growing or distributing food, staff and/or volunteer time, experience with culturally responsive practices,

and prioritization of healthy foods. The six partners were two farms, three food pantries, and a combined farm and pantry. Each partner received $10,000 to grow and/or distribute culturally preferred foods over seven months. Growing culturally preferred foods on farms and distributing them in food pantries targeted system and environmental changes.

To determine which foods to grow and distribute, the university team provided partners with the Northwest Arkansas Cultural Food Preference toolkit built through community feedback with specific attention to Hispanic and Marshallese communities. Partners participated in monthly meetings with the university team to provide updates, discuss best practices, and receive technical assistance. The university team invited partners to participate in a culturally responsive best practices training led by Food Bank of the Rockies and a trauma-informed nutrition security training hosted by Leah's Pantry. Table 1 provides a profile of partners. The University of Arkansas for Medical Sciences Institutional Review Board (#262625) approved this project.

Table 1

Partner Profiles

Partner	Type of Partner	Number of Full-Time Equivalent Staff & Volunteers Per Week	Farm Size (acres)	Average Number of People Served Monthly by Pantry/ Educational Programs	Food from Farm Distributed Per Month (average pounds)
Farm 1	Teaching farm	1.4 full-time equivalent staff; 3.4 volunteers	1.5	3,638	350
Farm 2	Farm	4.5 full-time equivalent staff; 5 volunteers	2	N/A	3,240
Pantry 1	University-based food pantry	2 full-time equivalent staff; 4.9 volunteers	N/A	910	N/A

Partner	Type of Partner	Number of Full-Time Equivalent Staff & Volunteers Per Week	Farm Size (acres)	Average Number of People Served Monthly by Pantry/ Educational Programs	Food from Farm Distributed Per Month (average pounds)
Pantry 2	Rural food pantry	1 full-time equivalent staff; 65 volunteers	N/A	1,800	N/A
Pantry 3	Food pantry	1 full-time staff equivalent; 15 volunteers	N/A	150	N/A
Pantry/Farm 1	Food pantry and farm	Pantry – 3 full-time equivalent staff; 75 volunteers Farm – 3 full-time equivalent staff; 8 volunteers	2	4,725	1,400

Data Collection

A process evaluation was conducted to evaluate implementation effectiveness. Implementation effectiveness was determined by an increase in the number of culturally preferred items distributed by a pantry or an expansion of yield of culturally preferred foods produced by a farm. The senior evaluator conducted semi-structured interviews—chosen because of their flexible, iterative nature—with partners after seven months. Developed internally by the senior evaluator, the semi-structured interview guide was based on key components of the implementation, including facilitators and challenges to implementation, organizational changes resulting from implementation, unintended consequences of implementation, and recommendations for other organizations looking to replicate this work. A representative question was, “What challenges, if any, did you encounter during the cultural food distribution project?” Following the trauma-informed principles of trustworthiness and transparency, informed consent was obtained, and confidentiality was outlined, including how data from

interviews would be stored and used. Partners were also given the opportunity to review findings prior to manuscript finalization, which aligns with the principles of empowerment, voice, and choice (Karmakar & Duggal, 2024). Semi-structured interviews allow the interviewer and interviewee to remain open to additional lines of inquiry relevant to project aims as they arise, which aligns with the principle of collaboration and mutuality. The interviews were conducted through Microsoft Teams video; the interviews were approximately 35 minutes in length; they were recorded and transcribed.

Qualitative Data Analysis

A rapid thematic analysis of interview transcripts was conducted (St. George et al., 2023). The primary analysis team was comprised of two evaluators. After reading and re-reading the transcripts, the senior evaluator developed a rapid coding template using *a priori* codes from implementation goals with space for emergent secondary codes. The secondary evaluator read all transcripts, looking for patterns, identifying codes, and building a codebook of initial emergent themes and subthemes. The two evaluators then met to review the codebook and resolve discrepancies between coders through discussion and consensus. The two evaluators revised the codebook twice, changing themes and definitions as needed. The university team reviewed the codebook, which was refined based on their experience supporting implementation, and discrepancies were resolved through consensus. Partners reviewed the finalized themes and resolved discrepancies through discussion and consensus.

Results

The six partners included two farms, three food pantries, and a combined farm and pantry. All partners successfully increased the number of culturally preferred items distributed (pantries) or expanded the yield of culturally preferred foods produced (farms) through the use of

the cultural food preference toolkit and collaboration with the university team. Table 2 includes each partner's approach to implementation, specific culturally preferred foods grown and/or distributed, the number of new culturally preferred foods distributed, and pounds of culturally preferred foods grown or distributed.

Table 2

Approach to Implementation & Distribution

Partner	Approach to Implementation	Distribution	Culturally Preferred Foods Grown/Distributed[a]	Number of New Culturally Preferred Items Distributed	Pounds of Culturally Preferred Foods Grown and/or Distributed
Farm 1	Expanded yield of culturally preferred foods	Aligned distribution to educational programming sites at community centers, schools, and school-based food pantries	Apples, bell peppers, carrots, cilantro, garlic, lettuce, onions, radishes, potatoes, sweet potatoes, tomatoes, winter squash	0	975.44
Farm 2	Expand yield of culturally preferred foods	Distributed items at regional food banks and food pantries	Bell peppers, cabbage, carrots, cilantro, cuts of pork, chicken, and lamb, garlic, lettuce, onions, potatoes, radishes, tomatoes, watermelon	0	8,436.30
Pantry 1	Added new culturally preferred foods to include in choice-based list	Distributed onsite at pantry location	Apples[b], bananas[b], bouillon cubes (chicken & beef); canned fish; cilantro; cooking oil[b]; corn[b]; cuts of pork, chicken, and lamb; garlic[b]; jalapenos; limes[b]; milk[b]; onions[b]; potatoes[b]; tomatoes[b]	10	1,690.95
Pantry 2	Partnered with Hispanic faith-based organizations to distribute	Distributed onsite at pantry location and through Hispanic faith-based organizations	Apples, avocadoes, black beans[b], grapes, Masa flour[b], onions[b], sweet potatoes	3	2,174.00
Pantry 3	Added cultural section to new client choice model pantry	Distributed onsite at pantry location	Apples, bouillon cubes[b], canned fish, cinnamon[b], cooking oil[b], eggs, garlic[b], Masa flour, milk[b], onions[b], potatoes[b], sweet potatoes	7	Data (in pounds) unavailable due to staff turnover at the pantry

Partner	Approach to Implementation	Distribution	Culturally Preferred Foods Grown/Distributed[a]	Number of New Culturally Preferred Items Distributed	Pounds of Culturally Preferred Foods Grown and/or Distributed
Pantry/Farm 1	Expanded yield of culturally preferred foods & added new culturally preferred foods	Distributed items at two onsite food pantry locations	Apples[b], black beans, cabbage, canned tuna[b], corn[b], onions[b], potatoes[b], radishes, sweet potatoes[b], watermelon, white rice[b]	7	2,813.90

[a]Hispanic/Marshallese culturally preferred foods from the regional toolkit.
[b]Newly grown or distributed by the organization.

Evaluators identified six major organizational themes as a result of the implementation of the pilot project: 1) frequent discussion about culturally preferred foods within organizations; 2) received positive feedback from clients; 3) incorporation of culturally preferred knowledge into other programming; 4) formed new partnerships with procurement and distribution sites; 5) identified sustainability concerns related to continuing to offer culturally preferred foods; 6) committed to continuing to grow culturally preferred foods. All were themes that partners noticed as a result of the pilot implementation. Table 3 presents the themes and exemplary quotes.

Table 3

Themes and Exemplary Quotes

Themes	Exemplary Quotes
Frequent discussion about culturally preferred foods within organizations	"We're continuing to have more conversations and more emphasis on thinking about the cultural aspects of foods and how we're making sure we're inclusive with what we do." (Farm 1)
Received positive feedback from clients	"I think generally it's kind of made clients a little bit happier, especially a lot of our international clients, that's who we're targeting of course. I think it made them feel a little more comfortable having those items around." (Pantry 1)
Incorporation of culturally preferred knowledge into other programming	"I would love to focus, spend more time on the community meal piece of it. I know we're really great about the fresh produce. They incorporate that into their meals, including the ones that are culturally appropriate. But I would just love to be able to spend more time with that piece of it . . . serving a meal that the Marshallese population would really enjoy." (Pantry/Farm 1)
Formed new partnerships with procurement and distribution sites	"We talked to one of the managers of [the culturally appropriate grocery stores. . . and [had] conversations with them about what should we get? Like you see people buying stuff here, like what would be helpful to get?" (Pantry 3)
Identified sustainability concerns related to continuing to offer culturally preferred foods	"I think [this project] helped [the pantry leadership team] recognize that any ways we can look for additional funding in the future to provide this sort of produce would be super beneficial for the clients. I think it, having the ability to do that, see how happy the clients are, has planted that seed in their head for the future. And so, I think any chance we get to find additional funding, I think one of the main considerations would whether we can provide more fresh produce." (Pantry 1)

Themes	Exemplary Quotes
Committed to continuing to grow culturally preferred foods	"… We were really excited to see that a lot of what we were growing is in the [regional cultural food preference toolkit]. That was a really reassuring thing … we're definitely going to use that to inform future crop plans. I think that was like the biggest takeaway, being excited that we're already on the right track and knowing how to refine that to be even more culturally appropriate to our neighbors." (Farm 2)

Frequent Discussion About Culturally Preferred Foods Within Organizations

Partners highlighted frequent organizational conversations about culturally preferred foods following the implementation of the pilot project. These conversations included awareness and consideration around purchasing culturally preferred foods. In addition, they spoke about a shared objective to enhance their understanding of their client population and ensure that the food resonates with the cultural diversity within their communities. Specifically, three partners initiated conversations with clients to gain insight into preferred foods. One partner at a food pantry shared, "As [clients] are doing the rounds and picking the foods, I'm in the room, and it naturally starts discussions and conversations about 'What kind of food do you like?' 'What do you not see here that you wish you could have?'" Two partners had internal conversations to enhance the amount of culturally preferred food they provided. Implementation resulted in a new intentionality among partners to have conversations that address cultural considerations around food within these organizations.

Received Positive Feedback From Clients

Partners discussed the widespread appreciation from their clients after distributing culturally preferred foods. They relayed that their clients frequently expressed gratitude for fresh produce and felt more comfortable with culturally preferred foods. One farm shared feedback from a client who stated, "I'm always trying to be healthy for my family and this produce has

helped me succeed with this goal." One partner noted increased comfort among their international clients with the culturally preferred foods they received at the pantry. Another partner received specific praise for their pantry's expansion of client choice as a result of offering culturally preferred foods.

Incorporation of Culturally Preferred Knowledge Into Other Programming

Several partners applied culturally preferred knowledge gained from training and the regional cultural food preference toolkit to other aspects of their programming. For example, when asked how, if at all, the partner organization changed as a result of the pilot, one partner named how they started to incorporate Hispanic culturally preferred foods into their community meals program with an intent to expand this to the cultural preferences of Marshallese community members. Another partner shared how they integrated culturally preferred foods into their Community Supported Agriculture (CSA) bags, which could be purchased with SNAP benefits. One partner's implementation of culturally preferred foods coincided with the start of a client-choice pantry model. The transition to a client-choice model, along with the increase in culturally preferred foods, allowed clients to pick and choose food pantry items that best fit their needs, with specific access to fresh produce and scratch-cooking ingredients. One of the pantry partners stated that they planned to share new cultural knowledge as part of an upcoming hunger conference: "We'll have lots of pantry representatives from [organizations] across the U.S. so being able to have a resource [toolkit] to share with them is super helpful . . . and just makes all of our missions better." Integrating culturally preferred knowledge into other areas of programming highlighted partners' commitment to extending their impact beyond the immediate scope of this pilot project.

Formed New Partnerships with Procurement and Distribution Sites

When asked about success stories as a result of the pilot, four of the partners discussed establishing new partnerships with procurement and distribution sites as part of their focus on culturally preferred foods. The nature of these partnerships varied. Two partners (one farm and one food pantry) formed a relationship; the farm piloted the distribution of different cuts of pork, chicken, and lamb to the food pantry, where clients had requested different cuts of meat. Another partner added two new distribution sites and was more strategic about aligning the foods it distributed based on the food preferences of the specific communities in those geographic areas. Still, another partner formed new relationships with two local culturally appropriate grocery stores, which allowed them to source items from familiar locations for their clients and contributed to the support of local businesses. Three partners highlighted their strengthened relationships with other partners in the cohort, which allowed them to provide mutual support, share insights, ask questions, and strategize collaboratively. During interviews, one partner elaborated: "I think we could call [the partners] up and be able to have conversation[s] because we're going through similar things; we're part of this larger effort together. We've worked with [partners] before in other capacities, but this is just another touchpoint; it's great to further strengthen [those] relationship[s]." These partnerships expanded their networks and allowed them to serve their communities better.

Identified Sustainability Concerns Related to Continuing to Offer Culturally Preferred Foods

Partners identified concerns about the sustainability of continuing to offer culturally preferred foods to clients when asked about challenges encountered during the pilot. While commitment to providing culturally preferred foods was strong, challenges related to accessibility, cost, and availability were discussed as significant considerations. One partner

stated, "[The funding] could not have come at a more perfect time. . . because we were transitioning to a bigger farm, and a lot of the extra funding for COVID-19 [which allowed for the purchase of food] had tapered off, yet our numbers were still so high. . . this [funding] really made it possible for me to continue to offer a good amount of food and variety to clients." Two partners acknowledged the need to actively seek additional funding to ensure the continuation of providing culturally preferred foods. Another highlighted that irregular stock and limitations from smaller distributors were barriers to consistently providing culturally preferred foods at their pantry, especially in large quantities. Partners reported financial and logistical challenges in their efforts to provide culturally preferred foods and said that continued financial support and strategic planning are needed to address these challenges in the long term.

Committed to Continuing to Grow Culturally Preferred Foods

When asked about pilot challenges, farming partners reported issues with particularly intense insect activity and plant and soil diseases (what partners referred to as pest pressure) during the growing season for this pilot project. However, interviewees indicated that this activity was due to Arkansas's humid climate and was unrelated to growing specific culturally preferred foods. All three farms expanded their current yield of culturally preferred foods, with one adding new culturally preferred foods. One farming partner stated: "[We grew] more of the types of things we were already growing but chose to do more sweet potatoes or peppers because of the connection with the [pilot], and knowing there's a great preference for that, rather than something like okra." Farming partners stated that the intense insect activity and plant and soil diseases did not discourage partners from continuing to grow culturally preferred foods in the future.

Discussion

This project identified six themes from staff and volunteers as a result of implementing a cultural food preference pilot in farms and food pantries. These findings build on the limited body of research emphasizing the importance of culturally preferred foods to clients within the charitable food system (Carle & Rosenberg, 2018; Long et al., 2022; Wright et al., 2019). This project is one of few to include farmers' perspectives in evaluating the growth of culturally preferred foods for distribution in food pantries (Bacon et al., 2024).

The first theme demonstrates that growing and distributing culturally preferred foods led to frequent discussion within organizations about those foods, shaping organizational outlook and interactions with clients. These findings build on previous research, which shows that client-volunteer and client-staff conversations contribute to improved client experience (Cooksey-Stowers et al., 2018b; Jones et al., 2017; Wilson et al., 2022)—discussion of culturally preferred foods extended into direct conversations with clients.

As noted in the second theme, clients expressed positive feedback about the distribution of Hispanic and Marshallese culturally preferred foods. In particular, clients highlighted the availability of fresh produce, the expansion of choice, and the familiarity of seeing culturally preferred foods. This positive response affirms previous findings from food pantry clients nationwide who express a desire for foods relevant to their households (Carle & Rosenberg, 2018; Long et al., 2022; Wright et al., 2019). This finding highlights positive client responses to Marshallese culturally preferred foods, adding to the limited literature on studies of food preferences that focus on Pacific Islander populations (Long et al., 2022; Rowland et al., 2018).

The third theme focused on incorporating culturally preferred knowledge into other aspects of programming as a result of the pilot, which demonstrated partner commitment to extending their impact beyond the scope of the pilot. Partners cited examples of incorporating

culturally preferred foods into CSA boxes and community meal programs. While the literature has documented the implementation of nutrition education interventions in community meals programs, there is little documentation of cultural interventions in these programs (Rowland et al., 2018). Evaluating partners' incorporation of Hispanic cultural foods into their community meal programs was outside this project's scope; however, further research should investigate the effectiveness of these interventions from both the client and partner levels. Similarly, while research has demonstrated the effectiveness and client satisfaction with CSA programs and farm-to-clinic programs, this project makes an important contribution because it fills a void in the literature documenting facilitators and barriers to implementation of such programs from the perspective of farmers (Cotter et al., 2017; Tripp et al., 2020). Further research on facilitators and barriers to implementing cultural interventions in community meals and CSA programs is needed to fully understand the potential efficacy and implementation barriers and facilitators of such programs.

The formation of new partnerships with procurement and distribution sites was the fourth theme outlined by partners as a result of the pilot. New and strengthened relationships between partners, specifically connecting farmers and food pantries, were integral facilitators to increasing this work's success and long-term sustainability. Building on established community networks within the cohort of partners helped expand the network of sites where food pantries could procure food items (Tripp et al., 2020). Before pilot initiation, the FI CofP laid the groundwork to cultivate these relationships, which were leveraged throughout the implementation process and proved to be a strength of the pilot implementation. With supply chain challenges and inflation, protein items remained high-cost items for food pantries to purchase; as a result, partnering with a farming partner willing to supply cuts of meat was a

strategic fit for the food pantry (Adjemian et al., 2024; Federal Trade Commission, 2024). Our findings highlight that partnering with local farms and culturally appropriate grocery stores is a viable approach to sourcing and providing culturally preferred foods. As indicated in Table 2, the majority of culturally preferred foods distributed by farms were fresh produce. Research demonstrates the importance of safety net food programs leveraging local food sources to increase community access to healthier and fresh foods (Arkansas Department of Agriculture, 2022; Harris et al., 2012). Our findings provide preliminary evidence that partnering with local farms to distribute culturally preferred produce may correlate with this increased access.

Sustainability was the fifth theme outlined by the partners. When asked about pilot barriers, partners emphasized that the success of continuing to offer culturally preferred foods relied on overcoming challenges related to access and cost. Previous research has shown that lack of resources is a significant barrier to food pantries providing culturally preferred foods (Cooksey-Stowers et al., 2018a). This project affirms that rising costs and inflation continue to impact food pantries, and supply chain deficiencies across the food system exacerbate the situation (Adjemian et al., 2024; Gizem Templeton et al., 2022). Funding sources may have to consider the continued need to support the cost of food when outlining grant opportunities for food pantries.

The sixth and final theme is a commitment to continuing to grow culturally preferred foods. Notably, the current project is one of few that prioritize the perspective of farmers growing culturally preferred foods (Bacon et al., 2024). Adding more culturally preferred foods to their harvest did not significantly change the way these farmers grew food. Many of the recommended foods were foods they already grew; they just needed to increase production and address preventive measures around insect activity, as well as plant and soil diseases. Farmers

new to growing culturally preferred foods could start by expanding the yield of culturally preferred foods they already grow before attempting to grow completely new crops. Expanded production was made possible by the grant funding for this project; however, in the absence of targeted funding, increasing production may be challenging for many local farmers. An exception to this is the discovery in this project of preliminary evidence that growing Marshallese-preferred foods is relatively easy for farmers in a rural Southern state.

Conclusion

This project documented the organizational factors associated with implementing a cultural food preference pilot in food pantries and farms with specific attention to Hispanic and Marshallese culturally preferred foods. This project is one of few that incorporate the perspectives of farmers growing culturally preferred foods. Partners demonstrated a commitment to extending impact beyond the scope of the pilot by incorporating culturally preferred knowledge into other programming, developing partnerships with procurement and distribution sites, and an intent to continue to grow culturally preferred foods. This project emphasizes the need to address sustainability concerns related to implementing such programs. Project findings provide important information and guidance for researchers, staff, and volunteers implementing culturally preferred foods in food pantries and farms across the U.S.

Reflection

This project's small sample of six organizational partners in a rural southern state limits the generalizability of its findings to a larger population. The focus of this project was on the Hispanic and Marshallese cultural preferred foods because of the disproportionately high rates of food insecurity among these communities in Arkansas. This project fills a gap in the literature on integrating farmers' perspectives in growing culturally preferred foods for distribution in food

pantries (Bacon et al., 2024). The project is also among a limited number of studies that focus on addressing the cultural food preferences of immigrant and migrant communities, specifically Marshallese Pacific Islanders (Long et al., 2022; Rowland et al., 2018; Wright et al., 2019). Focus on the cultural food preferences of Marshallese Pacific Islanders is particularly important from a trauma-informed perspective in light of the nuclear testing carried out in the Republic of the Marshall Islands by the U.S. military from 1946 to 1958, which destroyed traditional food production and introduced imported processed foods to the Marshallese diet (Ahlgren et al., 2014).

Client surveys were conducted as part of this project to receive feedback on the culturally preferred foods grown and distributed; however, the results were not included in this article due to insufficient sample sizes from the target populations. Future projects should solicit client feedback (in surveys or interviews) to better understand how partners can respond to client preferences. Future farmers should focus on expanding their yield of culturally preferred foods they are already growing before attempting to grow new types of culturally preferred foods. In addition, pantry partners emphasized the importance of strategic planning in deciding whether pantries want to distribute a large quantity of a few culturally preferred items or small quantities of a wide variety of culturally preferred items.

This project involved a trauma-informed approach, as the university team relied on a community-based participatory approach to guide this pilot with specific attention to Hispanic and Marshallese communities. In alignment with the community-based participatory approach, the FI CofP and a stakeholder advisory board of members with low food security experience guided the pilot project implementation. The university team applied trauma-informed principles during semi-structured interviews with partners and invited them to participate in a training

focused on trauma-informed nutrition security hosted by Leah's Pantry during the pilot project. The training described the trauma-informed approach and how partners could apply it to policy, system, and environmental changes (Leah's Pantry, n.d.-b). Partners demonstrated a commitment to extending the impact of implementing culturally preferred foods; however, in the future, sustainability concerns related to funding, supply chain, and rising costs of food must be addressed to ensure this implementation has a long-term impact. Specifically, farmers were able to increase the production of existing culturally preferred foods; however, dedicated funding is critical to support this increase.

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Developing a Scale to Measure Willingness to Seek Food-Related Assistance: Insights from a College Population

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Abstract

Background: College campuses have implemented food pantries and basic needs programs to support students' well-being and promote food security. However, barriers associated with use persist. Understanding help-seeking behaviors and an individual's willingness to seek food-related assistance is essential to inform programming and advance food security research. Thus, the purpose of this study was to develop a scale measuring an individual's willingness to seek help from various people and resources during a period of limited or uncertain access to adequate food.

Methods: Scale development occurred in three phases: expert panel evaluation, cognitive interviews for feedback and refinement, and online survey administration (n=1093), alongside the United States Department of Agriculture Adult Food Security Survey Module. Chi-squared tests analyzed associations between willingness and categorical variables. Pearson's linear regressions were used to explore relationships between food security, socio-demographic characteristics, and willingness scores.

Results: Food insecurity was negatively associated with Willingness Scale scores (ß= -0.018, $p = 0.04$). The very low food security group had the most individuals classified as unwilling ($p < 0.01$). Willingness to seek help from one's circle of support was the most preferred source of assistance across all food security groups. Although social media was the least favorable source of support, those with very low food security were the most willing to seek assistance through social media (22.3%).

Conclusion: The findings from this study emphasize the importance of an individual's circle of support in improving food access and contribute to a broader understanding of the relationship between food security and food access use.

Keywords: college students, food insecurity, scale development, willingness

Developing a Scale to Measure Willingness to Seek Food-Related Assistance: Insights from a College Population

Addressing a lack of food security, which affects 13.5% of households across the United States, offers a vital opportunity to empower communities and implement innovative solutions to improve access to nutritious food (U.S. Department of Agriculture Economic Research Service, 2024). Defined as a household-level economic and social condition characterized by limited or uncertain access to adequate food, a lack of food security is often associated with the immediate consequence of hunger (U.S. Department of Agriculture, 2024) However, a lack of food security is linked to long-term, adverse health implications, including diet-related chronic diseases (Laraia, 2013; Thomas et al., 2021). These long-term health impacts pose a serious concern, particularly for populations with a heightened risk of experiencing a lack of food security (Flores & Amiri, 2019; Leung et al., 2021).

College students are disproportionately affected by a lack of food security, with an estimated prevalence of 41%, which is significantly higher than that of the general population (Nikolaus et al., 2020). Many college students face unique challenges directly linked to their enrollment in higher education, such as the financial strain of tuition and living expenses, limited time due to academic commitments, and the responsibilities associated with newfound independence (Fortin et al., 2021; Zigmont et al., 2021). For some, college is their first experience managing their finances and providing for themselves (Zigmont et al., 2021). Like the general population, a lack of food security among college students is associated with adverse physical and mental health outcomes, including diminished overall physical health, and increased stress, anxiety, and depression (Guzman et al., 2022; Oh et al., 2022; Cedillo et al.,

2023). These struggles are further compounded by their detrimental effect on academic performance, such as lower grade point averages and higher dropout rates (DeBate et al., 2021).

Ongoing efforts to combat a lack of food security across the United States involve the development of innovative interventions and programs (U.S. Department of Agriculture, 2021). However, significant barriers persist, preventing or restricting the use of these food access resources, such as low variability or cultural relevance in provided food options, limited access or transportation, and restrictive program participation eligibility requirements (Leung et al., 2013; Fong et al., 2016; Klobodu et al., 2021). The Supplemental Nutrition Assistance Program (SNAP), known as CalFresh in California, is one example of an underutilized resource within college populations (U.S. Government Accountability Office, 2024). Across the 10-campus University of California system, only 22% of undergraduate students eligible for CalFresh were enrolled in the program in 2019 (Rothstein et al., 2024). Commonly noted challenges with SNAP enrollment include a long and often confusing application process, work eligibility requirements, and stigma surrounding food access programming supported by government funding (Freudenberg et al., 2019; Chrisman et al., 2024; Martinez et al., 2024).

To help bolster food security for students outside of federal or state programs, many colleges have implemented food pantries on campus for students to access. However, while the formation of campus pantries and basic needs centers helps mitigate the challenges often associated with location and eligibility, stigma remains a major barrier, often deterring use (El Zein et al., 2018; Brito-Silva et al., 2022). Further, students experiencing a lack of food security may not perceive themselves as food insecure and thus may refrain from using food access resources (Engel et al., 2022). In a study conducted at the University of California, Davis, results from individual student interviews showed that students across all four food security

classification groups (high food security, marginal food security, low food security, and very low food security) were hesitant to use on-campus food access programs in fear they would be taking resources away from other students with greater need (Sklar et al., 2024).

This theme of not wanting to use resources due to the perception that others could benefit more has been noted within the literature as a deterrent to food access resource use amongst college students (Fortin et al., 2021; Mitchell & Prescott 2022). Re-branding food access programs to highlight details about who is eligible and encouraged to use food access resources may decrease the stigma associated with use while improving food security status (El Zein et al., 2022; Sklar et al., 2024). However, to create effective change, additional insight into an individual's help-seeking behaviors and willingness to seek help from various people and resources during a period of limited or uncertain access to adequate food is essential. Beyond stigma, cultural differences/experiences may influence an individual's willingness to seek help and where they choose to seek it. Previous research has noted differences in help-seeking by race/ethnicity (Taylor et al., 2004; Saykeo et al., 2018), age, and gender (Mackenzie et al., 2006). Similarly, differences in food-related help-seeking or resource use have been demonstrated among individuals who have previously experienced hardships compared to those only experiencing these challenges for the first time, including the way in which they respond or from whom they seek help (Mooney et al., 2023). Understanding these cultural and identity-based differences can provide insight into where or to whom students are willing to turn in times of need and can help shape future programming and food security research.

Previous researchers have explored and created tools to assess an individual's willingness to seek mental health-related resources (Wilson et al., 2005); however, to date of publication, no standardized tool has been used to measure individual willingness to seek

assistance related to food acquisition. Thus, the purpose of this study is to develop a scale that measures individual willingness to seek help from various people and resources during a period of limited or uncertain access to adequate food. The secondary objective is to assess how demographic characteristics and food security status differ based on overall willingness scores, as calculated by the Willingness Scale.

Methods

Willingness Scale Development

The authors thoroughly reviewed relevant literature to ensure the inclusion of well-constructed and contextually appropriate questions to measure food-related, help-seeking behaviors. The scale's initial design was modeled from the General Health Seeking Questionnaire framework (Wilson et al., 2005) and the creation and validation were guided by previously published literature (Boateng, 2018). A Likert scale design was chosen to capture subjective responses while minimizing respondent burden. The scale was designed to address two key questions: (1) To what extent are individuals willing to seek food-related assistance? (2) Which sources are they most likely to turn to for help? Guided by these key questions, the Willingness Scale was developed, and the main scale question was formulated. Sub-questions, referred to as question items, including physical resources, community members, and individuals within a person's circle of support, were carefully selected to represent opportunities for food-related support (Figure 1). The Circle of Support category includes: parents/guardians, other family members, friends, acquaintances, significant others/intimate partners (e.g., girlfriend, boyfriend, partner, wife, husband, spouse), as well as housemates and roommates. This category was developed using the Circle of Support model, which emphasizes the different layers of relationships in an individual's life (Snow, 1998). Rather than listing each individual or

relationship type as separate items, this approach was chosen to ensure inclusivity and proper scoring for individuals who may not have all these specific relationships.

Figure 1

Willingness Scale Design: Sources of Assistance for Food Access

Initially, the scale consisted of a single question prompt and seven question items with total scores ranging from 0 to 28 categorized into three levels of willingness: unwilling (0–9), low willingness (10–19), and willing (20–28). A panel of experts, including one statistician, four nutrition faculty, two graduate students, and two registered dietitians, reviewed the scale for content and clarity. Based on their feedback, the question and the question items were refined for

precision. To address the broad scope of the "circle of support" item within the Willingness Scale, the authors added a supplementary question to identify which specific members within an individual circle of support they would be willing to approach for food-related assistance. Two items were combined, resulting in a six-item scale. Additionally, the scoring system was updated to ensure consistency and enhance interpretability, following recommendations from the statistician. Potential responses ranged from 1 to 5 points per item to maintain a positively anchored scale and avoid confusion surrounding a score of 0, which could be indicative of a lack of response rather than low willingness: Not Willing (1 point), Somewhat Unwilling (2 points), Neutral (3 points), Somewhat Willing (4 points), and Willing (5 points), with total scores ranging from 6 to 30. To facilitate pattern identification and comparisons, a tertiary category scoring scale was used: Unwilling (6–14), Low Willingness (15–22), and Willing (23–30). The final scale can be viewed in Appendix A.

Cognitive interviews were conducted with college students (the scale's target population) to ensure clarity and proper interpretation of the questions. Participants were recruited via email if they had previously participated in a study and permitted follow-ups for future research. To ensure equity and randomness in selection, a random number generator was used to select the individuals invited to participate. A convenience sample of nine University of California, Davis college students participated in online individual interviews held over Zoom, lasting approximately 10–15 minutes each. All interviews were recorded and led by the same graduate student researcher. Participants verbalized their thought processes using a concurrent think-aloud approach while responding to the scale. Participant responses were analyzed using qualitative content analysis and discourse analysis. Recommendations, feedback, confusion, and misinterpretations were documented, and participants were encouraged to suggest ways to make

questions more clear/inclusive. Based on the interviews, the scale was revised to enhance clarity, with content modified or removed as necessary and additional examples added to improve comprehension. Additional cognitive interviews were conducted with five participants to confirm that the revisions were effective and that no further changes were required. Interview participant demographics can be found in Table 1. The study's interview protocol, the interview guide, and the Willingness Scale were approved as exempt research by the University of California, Davis Institutional Review Board.

Table 1

Sociodemographic Characteristics of Interview Participants

Characteristics	Total	
	n	%
Race		
White	4	28.5
Middle Eastern	2	14.2
African American/Black	1	7
Latino/a/x/Hispanic (Mexican-American, Puerto Rican, Cuban)	2	14.2
Gender		
Female	11	78.5
Male	3	21.5
Class Standing*		
Freshman	4	28.5
Sophomore	0	0
Junior	3	21.4
Senior	3	21.4
Graduate Student	3	21.4

*Class standing could not be determined for one student due to incomplete demographic data.

Willingness Scale Implementation

The Willingness Scale was integrated into a broader study to evaluate its use in a college student population and investigate the association between willingness to seek help from various people and resources during a period of limited or uncertain access to adequate food, demographic characteristics, and food security status. A convenience sample of college students was recruited during the academic Spring Quarter 2024. Recruitment targeted students enrolled in an introductory nutrition course, other introductory classes, and the university's research portal. Participants were required to be 18 years or older and enrolled at the University of California, Davis during the study period. Participants completed a questionnaire that contained the Willingness Scale administered through Qualtrics survey software (Provo, UT, 2015). Self-reported demographic information and food security status, measured with the 10-item United States Department of Agriculture Adult Food Security Survey Module (AFSSM) was also collected (United States Department of Agriculture, Economic Research Service, 2017).

Statistical Analysis

Participant demographics are presented as absolute counts (*n*) and percentages (%) for categorical variables, while continuous variables are summarized as mean ± standard deviation (SD). Chi-squared tests were conducted to analyze associations between categorical variables. The Shapiro-Wilk test was used to assess data normality and Levene's test was applied to evaluate variance. The authors transformed data where necessary to meet the assumptions for statistical analyses. Using the AFSSM coding scale, raw Adult Food Security Survey scores ranging from 0 to 10 were classified into one of four food security groups: high food security (0 affirmative responses), marginal food security (1-2 affirmative responses), low food security (3-5 affirmative responses), or very low food security (6 or more affirmative responses). Willingness

scores were categorized into three levels using the Willingness Scale tertiary scoring rubric: “Unwilling” (6-14), “Somewhat Willing” (15-22), and “Willing” (23-30). In addition, beyond the Willingness Scale scoring rubric, but for further study analysis, a binomial variable of “Willing” or “Not Willing” was also created to further explore participants' willingness to seek help from various people and resources during a period of limited or uncertain access to adequate food. Responses were coded as “Willing” (if students selected “Somewhat Willing” or “Willing”) or as “Unwilling” (if they selected “Neutral” or “Somewhat Unwilling” or “Not Willing”). "Neutral" was categorized within the “Unwilling” variable because their neutrality suggests a preference for exploring other options. Associations between willingness to seek help during a period of limited or uncertain access to adequate food and food security status were explored through univariate and multivariable linear regression, controlling for self-identified gender, race/ethnicity, first-generation student status, transfer student status, and household income. All statistical analyses were performed using STATA v13 (StataCorp, College Station, TX, USA), with a significance threshold set at $p < 0.05$.

Results

A total of 1,093 participants completed the questionnaire and were included in the analysis. Demographic characteristics, including self-reported gender, ethnicity/race, first-generation student status, transfer status, income, and food security classification, are noted in Table 2. Participants were primarily female (69.6%), of Asian descent (55.2%), and freshman (first-year) students (44.6%). Within the population, 59.9% were classified with high food security, 24.0% with marginal food security, 14.5% with low food security, and 8.6% with very low food security status. Chi-squared tests were conducted to investigate differences in willingness by characteristics including, but not limited to, race/ethnicity, income, gender,

transfer status, and first-generation student status. A significant association between willingness and transfer status ($X^2 = 11.89$, $p = 0.002$) was noted. However, no other relationship between willingness and demographic characteristics was observed.

Table 2

Sociodemographic Characteristics of Participants

Sociodemographic Characteristics	Total Population (n = 1093)	
	n	%
Self-reported gender		
Female	761	69.6
Male	287	26.3
Nonbinary/Third gender	24	2.2
Transgender	9	0.8
Other	11	1
Unreported	1	0.1
Age in years,		
Mean ± SD	19.78 ± 2.07	
Race/Ethnicity*		
African American/Black, not of Hispanic origin	32	2.9
American Indian/Alaska Native	11	1.0
Asian	603	55.2
Chicano	73	6.6
Latino/a/x/Hispanic Mexican-American, Puerto Rican, Cuban	215	19.6
Middle Eastern/Northern African	34	3.1
Pacific Islander	21	1.9
White, not of Hispanic origin	268	24.5
Other	21	1.9

Sociodemographic Characteristics	Total Population (n = 1093)	
	n	%
Unreported	24	2.2
First-Generation Student		
Yes	428	39.2
No	590	54.0
Unreported	75	6.8
Enrollment status		
Freshman 1st-year	487	44.6
Sophomore 2nd-year	222	20.3
Junior 3rd-year	167	15.3
Senior 4th-year	192	17.6
Other	19	1.7
Unreported	6	0.5
Transfer student		
Yes	145	13.3
No	944	86.4
Unreported	4	0.3
Household Income		
$0 – $39,999	286	26.2
$40,000 - $79,999	147	13.4
$80,000 +	289	26.4
Unreported	371	34.0
Meal plan		
Yes	510	46.7
No	581	53.3
Food Security Status		
High Food Security	578	59.9
Marginal Food Security	262	24.0
Low Food Security	159	14.5
Very Low Food Security	93	8.6

*Individuals identifying as multiracial are counted under each racial category they belong to.

The relationship between food security classification groups and willingness to seek help was analyzed, focusing on differences across the four food security classification groups. Table 3 reports differences in willingness categorization by food security classification groups. There were no significant differences in willingness scores across all three willingness categorization levels. While not significant, it was noted that as food insecurity increased, willingness to seek help decreased.

Participants with high food security were the most willing to seek help (29.5%) and those in the very low food security group were the least willing to seek help (21.2%). Participants with marginal food security had the highest frequency of individuals who scored as being "Somewhat Willing," while those in the high food security group had the lowest frequency of individuals in the "Somewhat Willing" (59.2%) category. Participants with low food security had the highest frequency of individuals who were unwilling to seek help (17.1%), while participants with high food security had the lowest (11.3%).

Table 3

Differences in Willingness Levels by Food Security Classification Groups: Counts and Frequencies

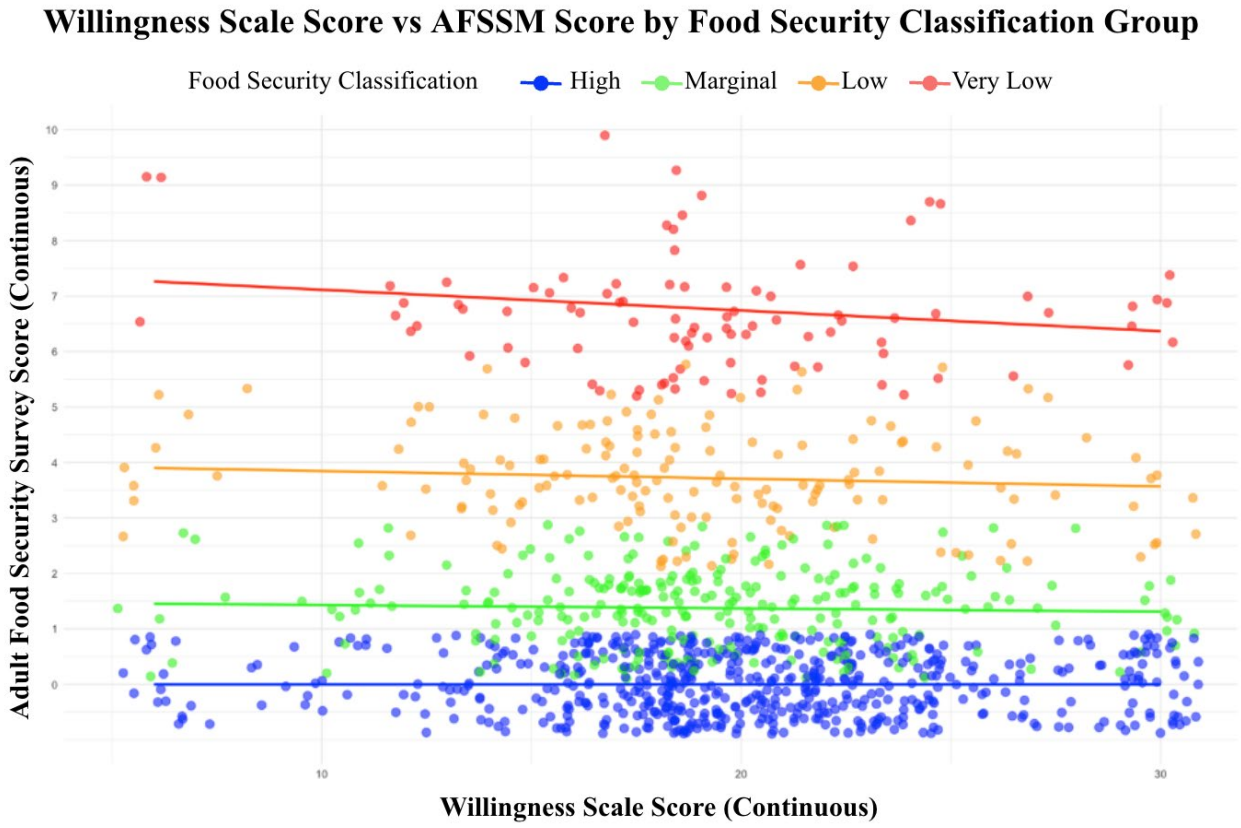
	High Food Security n = 578		Marginal Food Security n = 262		Low Food Security n = 159		Very Low Food Security n = 94		*p*-value
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*	
Willing to seek help	171	29.5	60	22.9	36	22.8	20	21.2	0.07
Somewhat willing to seek help	342	59.2	172	65.6	96	60.1	61	64.9	0.28
Unwilling to seek help	65	11.3	30	11.45	27	17.1	13	13.8	0.23

To illustrate a potential variation of willingness, a scatter plot was generated to examine the relationship between Willingness Scale scores and food security (AFSSM scores ranging from 0 to 10). For added clarity, data points were grouped and color-coded by the four Food Security classification groups: High Food Security (blue), Marginal Food Security (green), Low Food Security (orange), and Very Low Food Security (red) (Figure 2).

The plot illustrates distinct patterns across the Food Security classification groups. Among participants with High Food Security (blue), data are clustered towards higher Willingness Scale scores with a relatively flat trend line, suggesting a weak or negligible relationship between food security status and Willingness Scale scores. Conversely, participants with Very Low Food Security (red) exhibited a broad range of Willingness Scale scores and a negative trend line (-0.037). Within the Very Low Food Security group, individuals with lower Willingness Scale scores appeared to experience greater severity of food insecurity, as indicated by higher food security scores, compared to those with higher Willingness Scale scores in the same Food Security classification groups.

Figure 2

Relationship Between Willingness Scale Scores and Adult Food Security Survey Module (AFSSM) Scores by Food Security Survey Classification Groups: Scatter Plot with Trend Line



To further evaluate the relationship between food security and Willingness Scale scores, univariate and multivariate linear regression models were conducted (Table 4). Within the univariate model, food security was significantly associated with willingness scale scores (B = -0.011, p = 0.02). This means that as AFSSM scores increased, reflecting greater food insecurity, Willingness Scale scores significantly decreased. This suggests that food security may

significantly influence individuals' willingness to seek assistance, with those experiencing low food security potentially being less willing to seek out food-related help when in need.

Multivariate linear regressions investigating the relationship between food security status (AFSSM scores) and Willingness Scale scores were conducted, controlling for self-identified gender, race/ethnicity, first-generation status, transfer student status, and household income. Variables not significantly contributing to the model were dropped (first-generation status and ethnicity). Within the multivariate model, the beta coefficient for food security status slightly decreased after controlling for demographic and socioeconomic variables. However, food security remained significantly associated with Willingness Scale scores (B = -0.01, $p = 0.04$). As AFSSM scores increased, indicating greater food insecurity, Willingness Scale scores decreased. This suggests that food insecurity is linked to a lower willingness to seek help during a period of limited or uncertain access to adequate food.

Table 4

Univariate and Multivariate Linear Regression Results: Predictors of Willingness Scores by AFFSM scores.

Measure	β-Coefficient	95% CI	*p*-value
Univariate Model			
Food Security Status	-0.01	[-0.02, -0.00]	0.01
Multivariate Model*			
Food Security Status	-0.01	[-0.02, -0.00]	0.01

*Covariates within the multivariate model include income, transfer status, gender, race/ethnicity, and first-generation status.

The frequency of willingness for each item was calculated by food security classification to identify potential differences in the willingness across groups. (Table 5). Chi-square tests and subsequent pairwise comparisons were used to explore these differences further. Across all food security classification groups, willingness to ask one's "Circle of Support" for food-related assistance had the highest frequency of willingness across groups (73.4% -- 75.5%), with no significant differences between food security classification groups ($X^2 = 0.17$, $p = 0.98$). Similarly, for the "Community Members" item, significant differences in willingness responses were not observed across the four food security classification groups ($X^2=3.88$, $p = 0.27$). In addition, no significant differences in willingness were observed for "Campus Food Access Programs" ($X^2 = 4.6$, $p = 0.20$) or "Community Food Access Resources" ($X^2 = 5.53$ $p = 0.13$). For both Campus Food Access Programs and Community Food Access Resources, willingness to use these resources was highest among participants with High Food Security (62.8% and 41.6%, respectively). Similarly, "Federal Food Access Resources" had no significant differences in willingness across food security classifications, with the highest willingness reported in participants with Low and Very Low Food Security (58.9% and 58.2%, respectively). Willingness to use "Social Media" as a resource for food acquisition was the lowest out of the items, ranging from 13.7%-22.3%, with the highest willingness frequency observed in the Very Low Food Security classification group.

Table 5

Willingness to Seek Assistance Across Willingness Scale Items by Food Security Classification Group

	High Food Security n = 575		Marginal Food Security n = 262		Low Food Security n = 158		Very Low Food Security n = 94		X^2	*p*-value
	n	%	*n*	%	*n*	%	*n*	%		
Circle of support	434	75.5	197	75.1	118	74.7	69	73.4	0.17	0.98
Community members	176	30.6	75	28.6	50	31.6	37	39.4	3.88	0.27
Campus Food Access Programs	361	62.8	143	54.6	94	59.5	56	59.6	4.60	0.20
Community Food Access Resources	239	41.6	87	33.2	57	36.1	36	38.3	5.53	0.13
Social media	89	15.5	36	13.7	22	13.9	21	22.3	4.30	0.23
Federal Food Access resources	329	57.2	132	50.4	93	58.9	55	58.2	4.15	0.24

Discussion

The purpose of this study was to develop and implement a scale designed to measure college students' willingness to seek help from various resources during periods of limited or uncertain access to adequate food. The Willingness Scale was created to provide a nuanced understanding of how college students navigate food insecurity by leveraging social and community support systems. While previous research has examined the benefits, barriers, and stigma associated with food access resource use, limited studies have explored the complexities of willingness to seek help as a means to improve or maintain food security. Furthermore, while standardized quantitative instruments exist to assess elements of food security, such as internal

factors, food access usage, and food acquisition strategies, no tool has been specifically designed to assess an individual's willingness to seek help during food-insecure periods (Kilgrow et al., 2025). Thus, the creation of the Willingness Scale aims to close this gap and provide a measure of willingness to seek help that can be used for research and evaluation.

Findings from this study indicate a strong relationship between food security classification and willingness to seek food-related assistance. Food insecurity was negatively associated with Willingness Scale scores, with the very low food security group having the highest proportion of individuals categorized as unwilling to seek help. These results align with prior research suggesting that individuals experiencing a lack of food security may be reluctant to seek assistance, even when in need (El Zein et al., 2018; Sklar et al., 2024). While the present study did not collect qualitative data to explore the reasons behind this reluctance, existing literature suggests that fear of judgment and concerns that others may need resources more could be contributing factors (Anderson et al., 2022; Weaver et al., 2022; Sklar et al., 2024).

Previous studies have also noted that many students perceive financial and food-related struggles as inherent to the college experience (Fortin et al., 2021). As a result, students may hesitate to seek assistance or believe that available resources are meant for those with greater need (Zigmont et al., 2019; Sklar et al., 2024). Addressing these perceptions is essential to ensuring that support services are both accessible and utilized by students who could benefit from them. Additionally, previous studies have identified physical barriers to resource utilization, including inconvenient operating hours, transportation or location challenges, limited food options, and confusion surrounding basic needs program eligibility and application processes (Zigmont et al., 2019; El Zein et al., 2022; Mooney et al., 2023). Despite these barriers, research has consistently demonstrated that using food assistance programs is associated

with improved food security, increased fruit and vegetable consumption, and better physical and mental health (Chodur et al., 2023; Martinez et al., 2022; McArthur et al., 2020). However, understanding the determinants of use is first needed for students to receive these benefits.

When examining differences in willingness to seek food-related assistance across food security classification groups, findings remain relatively consistent. Across all four food security groups, the majority of students were willing to seek help from their circle of support. However, willingness was low for other scale items, including community food access resources, community members, and social media. An unexpected trend emerged among students with marginal food security, who exhibited a lower willingness to utilize campus and federal food access resources compared to their peers in other food security classifications. This discrepancy suggests potential gaps in trust, awareness, and accessibility of these resources. These findings align with prior recommendations advocating for enhanced programming and marketing strategies that reduce stigma, improve accessibility, and leverage innovative outreach methods to support students facing a lack of food security (El Zein et al., 2022; Sklar et al., 2024).

Interestingly, students with very low food security demonstrated the highest willingness to seek help through social media. While the exact reasons remain unknown, the anonymity associated with social media has been reported to encourage help-seeking behaviors through online media sources (Horgan & Sweeney, 2010). For students experiencing a lack of food security, social media can serve as a private platform to request assistance, seek out help, and/or share their experiences, thus decreasing possible feelings of stigma, shame, or embarrassment (Horgan & Sweeney, 2010). This finding highlights the potential of social media as a critical tool for connecting food-insecure individuals with assistance programs, especially when traditional help-seeking avenues may feel inaccessible or stigmatized. Future research should explore the

role of online platforms in helping students navigate hardships and experiences with a lack of food security.

Although no significant differences in willingness scores were observed across participant demographics within this sample, variations may exist in other college or adult populations based on factors such as race/ethnicity and/or gender identity. Previous research has shown that certain subpopulations—first-generation students, individuals from marginalized racial/ethnic groups, nontraditional students, and graduate students—are at greater risk of food insecurity compared to their peers (Tanner et al., 2023; Coffino et al., 2021; Willis et al., 2019). Additionally, cultural and identity-based differences have been documented in perceptions of the social acceptability of seeking assistance, which may influence help-seeking behaviors (Taylor et al., 2020; Saykeo et al., 2018; Mackenzie et al., 2006). These perceptions can significantly influence whether individuals are willing to utilize available food assistance programs or instead turn to informal support systems, such as relying on their circle of support or community networks. Understanding these dynamics is crucial for developing culturally and identity-relevant support programs that effectively address food insecurity and related challenges among diverse student populations. Future research should further explore how intersecting identities shape an individual's willingness to seek out food-related assistance and identify strategies to make programs and their offerings more equitable and effective.

Beyond demographic characteristics, personal and past experiences may also play a key role in shaping an individual's willingness to seek help. Although these were not captured within the current study, previous research has shown that students who have experienced food insecurity may be less inclined to seek assistance, as they may perceive food insecurity to be an everyday experience rather than an ongoing challenge (Mooney et al., 2024). Psychological

research further highlights a strong association between adverse childhood experiences (ACEs) and food insecurity, with evidence indicating that young adults with higher ACE scores are less likely to seek help in times of need (Jackson et al., 2016). Similarly, past experiences of discrimination among college students have been linked to increased food insecurity and influenced help-seeking behaviors (Gamba et al., 2024; Carter et al., 2010). Students who have faced discrimination may feel hesitant to engage with institutional, community, and/or federal food support systems, especially if they perceive these resources as stigmatized or inequitable (Peterson et al, 2022). Future research should explore how past experiences, including history of food insecurity, trauma, and/or experiences of discrimination, impact willingness to seek food-related assistance. Further, these factors may serve as an indicator of broader stressors among students experiencing low or very low food insecurity, which could inhibit one's willingness or ability to prioritize food-related needs. Understanding these nuanced factors can inform targeted interventions aimed at reducing barriers, building trust, and ensuring that food assistance programs are designed to effectively reach and benefit those who need them most.

The development of the Willingness Scale provides a critical step toward understanding the complexities of food-related help-seeking behaviors and preferences among college students. Ultimately, improving food access, resource use and awareness among students can lead to potential improvements in overall well-being, including better diet quality, sleep, physical health, and mental health (Chodur et al., 2023; Martinez et al., 2022). The use of this scale can help inform culturally relevant and identity-inclusive programs that reduce stigma, enhance access, and foster a supportive environment within campus and community food resources, ultimately improving diet, health, and related outcomes.

No research is without limitations. This study relied on cross-sectional data and self-reported methods, which may introduce response bias and only capture a snapshot in time, thus limiting insights into behaviors beyond the study period. Despite this limitation, this method was chosen to test the tool within a large population while minimizing respondent burden.

Additionally, although content validity was used, no additional reliability or validity testing was conducted. However, because the questionnaire is cross-sectional and focused on feelings and perceptions, responses may be dynamic and shift based on several other external factors, making traditional reliability testing less useful. While two graduate students were interviewed during the scale development phase, no graduate students took part in formal data collection because participants were recruited from another study that targeted undergraduate students. As graduate students may have unique experiences compared to undergraduate students, it is crucial that future research explore willingness, food security, and related variables of interest to further understand experiences for this group. Findings from the study population may not be fully representative or generalizable to all college campuses since demographics often vary.

Furthermore, it is important to note that individuals within broader racial or ethnic categories may have diverse experiences and cultural norms, even when belonging to the same group. These differences can arise due to various factors, including geographic location, religious beliefs, and upbringing. Future research should consider including more extensive and comprehensive race and ethnicity categories that capture and highlight these differences. Additionally, the University of California, Davis, is unique in that it has a Basic Needs Department serving more than a quarter of its student population. As a result, the stigma

surrounding food insecurity may differ on other campuses where food security resources are less widely available or openly discussed.

Conclusion

The Willingness Scale can potentially be a valuable tool for researchers and practitioners aiming to address a lack of food security more effectively and equitably. By identifying patterns in willingness to seek food-related help, policymakers, practitioners, and community organizations can design more targeted interventions to improve access to resources. While this study was limited in its evaluation of all factors pertaining to food security status, future research is needed to examine the role of willingness across diverse populations and its influence, not only on food security status, but also on other factors, such as health-related behaviors, mental and physical health, and dietary pattern.

Reflections

The study's reliance on cross-sectional data and self-reported methods limits long-term insights, which could be improved through further testing across diverse populations, such as young adults outside a college setting, and by cross-referencing questionnaire responses with qualitative data. To improve equity and inclusivity, the tool could be updated to reflect specific resources, individuals, and organizations that are most relevant to the population of interest. Moreover, while it was not the purpose of the study, it is important to note that numerous factors beyond general sociodemographic characteristics, such as adverse childhood experiences, trauma, and discrimination, could influence an individual’s willingness to seek food-related help. These factors were not measured in this study but should be considered in future research when forming conclusions about the impact of willingness scores.

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Appendix A

These next few questions will ask about your willingness to seek help from various people and resources during times of need. Please read over the questions carefully and choose the response that fits you best.

Please indicate: How willing would you be to ask the following social network and physical resources for assistance with obtaining food during a period of uncertain access to food?

	Please choose the response that fits you best 1 = Not willing 2 = Somewhat unwilling 3 = Neutral 4= Somewhat willing 5 = Willing
1. Circle of Support (Parents/Guardians; other family members; Friends; Acquaintances; Significant others; Intimate partners (e.g. Girlfriend, Boyfriend, Partner, Wife, Husband, Spouse), Housemates/Roommates)	
2. Community members (classmates, neighbors, professors, teaching assistant (TA), Dorm Advisor (RA), employer, co-workers, religious groups, student organizations, etc.)	
3. Campus-based food access resources (Aggie Compass, ASUCD Food Pantry, Satellite Food Pantries (e.g., AB540 pantry, LGBTQ+ Pantry, Graduate student pantry, etc.) AggieFresh, AggieEats food truck, Fruit and Veggie Up!)	

4. (Non-University) Community-based food access resources (food pantries, STEAC, night market, freedges, Wheels on Meals, etc.)	
5. Social media (Instagram, Facebook, Reddit, TikTok, Discord, Twitter, etc.)	
6. Federal/State food access resources (e.g., Food Stamps; SNAP/CalFresh/ EBT, WIC)	

Now add up the scores for each item to get a total: _____

Individual scores can vary from 6 - 30

Scores ranging from 23 – 30 would be considered *willing*
Scores ranging from 15– 22 would be considered *low willingness*
Scores ranging from 6 – 14 would be considered *unwilling*

Supplementary Question:

Display Logic: If participant answered #1 - Somewhat unwilling (1), Neutral (2), Somewhat Willing (3), or Willing (4)

2. Please indicate what members within your circle of support you would be willing to ask for assistance with obtaining food.

	Please choose the response that fits you best. 1 = Not willing 2 = Somewhat unwilling 3 =Neutral 4 = Somewhat willing 5 = Willing 0 = Not Applicable
1. Parents/Guardians	
2. Other family members	
3. Friends	
4. Acquaintances	
5. Significant others; Intimate partners (e.g. Girlfriend, Boyfriend, Partner, Wife, Husband, Spouse)	
6. Housemates/roommates	

"More Food on the Table": Participants' Experiences With Higher SNAP Benefits in California

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Abstract

Background: During the COVID-19 pandemic, households enrolled in the Supplemental Nutrition Assistance Program (SNAP, or CalFresh in California) began receiving emergency allotments (EAs), which boosted the value of their monthly benefits for food. This temporary but substantial increase in benefits presented a unique opportunity to qualitatively examine the impact of higher benefits on CalFresh participants' lives compared to when EAs ended and benefits returned to their regular levels. This research brief aims to share CalFresh participants' descriptions—in their own words—of what the experiences looked and felt like.

Methods: In the summer of 2023, as part of a more extensive, mixed-methods study, researchers at the California Association of Food Banks (CAFB) conducted in-depth interviews with 21 CalFresh recipients (12 in English, eight in Spanish and one in Chinese) to retrospectively document how they had used their higher benefits, and how EAs had affected their food intake, health, and overall well-being. We recorded, de-identified, and transcribed interviews, analyzed transcripts using an open coding process, and selected quotes representative of the main themes that emerged.

Results: Consistent with the literature on SNAP benefit adequacy, CalFresh recipients reported that having higher benefits improved their food and nutrition security, financial stability, and other markers of well-being. Specifically, CalFresh recipients used the higher benefits to purchase more food and more nutritious foods, maintain financial stability during income disruption, and reallocate resources toward other essential expenses to help improve their overall financial well-being.

Conclusion: Our research suggests that CalFresh recipients who received more benefits through EAs improved their health and financial stability. Participant experiences add to our understanding of how SNAP touches lives and strengthen the rationale for protecting, rather than restricting, access to SNAP for households in need.

Keywords: CalFresh, SNAP, emergency allotments, benefit adequacy, food security

"More Food on the Table": Participants' Experiences With Higher SNAP Benefits in California

The Supplemental Nutrition Assistance Program (SNAP) provides monthly benefits to low-income households to purchase groceries. SNAP is a federal entitlement program administered by the United States Department of Agriculture (USDA) and implemented by states and counties. Benefits are electronically loaded to participants' accounts monthly, and participants can spend them on food at authorized retailers using an electronic benefits transfer (EBT) card. Typically, the value of SNAP benefits is determined based on a combination of household size and income (*SNAP Eligibility | Food and Nutrition Service*, 2023), with maximum benefit levels based on the cost of the USDA's Thrifty Food Plan (TFP)—a very low-cost food plan that many experts agree does not adequately meet the practical and nutritional needs of most people (Davis et al., 2020; You et al., 2022).

The TFP is based on national averages and is not adjusted for state cost differences. Therefore, in states with a higher cost of living, even the maximum benefit falls well short of covering average food costs (Bronchetti et al., 2016). Moreover, less than half of all CalFresh (the name for SNAP in California) households receive the maximum benefit in California. On average, CalFresh issuances amount to about $6 per person per day, compared to an estimated minimum daily food cost of more than $11 (California Association of Food Banks, 2024).

Despite these limitations, CalFresh is the state's most important food security safety net program, with more than 5.5 million Californians (14% of the population) participating (California Department of Social Services, 2025). Across the nation, the positive effects of SNAP participation have been well-documented. Participation is linked with improved health, lower healthcare costs (Carlson & Keith-Jennings, 2018), and increased food security,

particularly when benefit levels approach adequacy (Leung & Wolfson, 2023). While more than half of households use up their monthly benefits within the first two weeks of receipt, research indicates that the longer benefits last in a household, the less likely that household is to experience food insecurity (Calloway et al., 2015; Castner et al., 2020). A report from the Center on Budget and Policy Priorities (Ver Ploeg & Zhen, 2022) estimated that increases in SNAP benefit amounts would further boost food security and improve health and nutrition outcomes, as households would increase spending on food prepared at home and food of higher nutritional quality. SNAP has also been found to impact economic outcomes positively. Many SNAP participants are workers with low incomes who face numerous challenges to economic mobility (Carlson & Keith-Jennings, 2018). SNAP helps maintain stability during periods of joblessness or income loss (Cook & East, 2024). Keith-Jennings and Chaudhry (2018) found that nearly three-quarters of working-age SNAP recipients work either during the month(s) they participate or within a year of receiving SNAP.

Most studies on SNAP and CalFresh benefit adequacy have been quantitative (using survey or administrative data to establish relationships between benefits and outcomes). Comparatively, studies featuring participant voices about the impact of higher SNAP benefits are relatively rare, with some exceptions (Gosliner et al., 2020; Ruder et al., 2022; Savin et al., 2021). It is challenging to qualitatively assess the impacts of benefit adequacy when benefits have historically not reached the level that households require to thrive; participants would need to imagine and report on what impact a substantial increase in benefits *might* have rather than the impact they *actually* had.

The issuance of emergency allotments (EAs) in response to the COVID-19 public health emergency provided an opportunity to help fill this research gap. EAs were additional monthly

benefits issued to households to bring them up to the maximum for their household size, or, for households that were already at or near the maximum, at least an additional $95 per month. To date, EAs represented the largest-ever increase in CalFresh benefit amounts (Malagon & Thorman, 2023). EAs ended in February 2023, but an analysis of administrative data from the California Department of Social Services (CDSS) determined that in the last month they were issued, CalFresh households had an average of $305 a month in regular benefits and an additional monthly average EA of $184 (Tan et al., 2024).

This temporary but substantial increase in benefits through EAs presented a unique opportunity to qualitatively examine the impact of higher benefits on CalFresh participants' lives compared to when EAs ended and benefits returned to their regular levels. In the summer of 2023, researchers at the CAFB conducted in-depth interviews with CalFresh recipients to retrospectively document how they had used their higher benefits and how EAs had affected their food intake, health, and overall well-being. The emerging themes mirror and provide greater insight into what has been uncovered through quantitative studies—that increased SNAP benefits improved participants' food security, enabled them to purchase more nutritious foods, and helped them achieve greater financial stability. This research brief aims to share CalFresh participants' descriptions—in their own words—of how these experiences looked and felt.

Method

These data come from a larger study on CalFresh EAs (Tan et al., 2024). In the summer of 2023, three months after EAs ended, CAFB conducted a mixed-method evaluation using a combination of administrative benefits data provided by CDSS, focus groups, and in-depth interviews to assess the impact of EAs and the importance of food banks to participants after EAs ended. We determined that the original study was not subject to Institutional Review Board

(IRB) approval after speaking with academic advisors and confirming that the nature and intent of the study were evaluative because it sought to determine the impact of a program and identify areas for improvement. Specifically, the study's primary aim was to assess how food assistance needs intensified after EAs ended and how food banks could better respond. The findings presented in this brief are drawn from the de-identified interview data collected from this evaluation.

For interview recruitment, an online interest form was created and contained screening questions about potential respondents' length of time using CalFresh, the benefits lost when EAs ended, age, household size, and enrollment in other public benefits programs. Social media and email messages invited CalFresh recipients to complete the form and volunteer for the study and were posted on CAFB's Facebook, LinkedIn, X (formerly Twitter), and Instagram platforms. Materials were translated into Spanish and Chinese and shared with food banks and CalFresh outreach partners to hand out to their clients. Respondents were eligible if they lived in California, were over 18 years old, and were currently receiving or had recently received CalFresh benefits. More than 250 CalFresh recipients completed the interest form. This pool was sampled to achieve a diverse range of participants in terms of language, age, household size, area of residence, and length of time on CalFresh. Given resource restraints and the focus on including diverse viewpoints,we aimed for a sample of between 10 and 20 interviews with three to five respondents older than 60, and five to seven respondents with children in their household. In total, we invited 44 interested respondents for interviews.

The interview guide was developed after conducting a literature review about SNAP benefit adequacy, a series of focus groups with CalFresh outreach workers (not reported here), and conversations with people familiar with CalFresh implementation. The interview guide

contained questions about participants' household demographics, the impact of EAs on daily life, experiences specific to the end of EAs, use of food bank services, and recommendations about CalFresh or other aspects of food assistance. Interviews were semi-structured using the guide; interviewers probed for clarification as needed. We modified the guide between interviews to ensure question clarity for participants and build on previous responses.

All interviews were conducted virtually using Zoom by researchers trained in qualitative data collection methods. Participants had the option to use video or audio only. Before beginning the interview, interviewers read a statement informing participants that the purpose of the study was to understand how they had been impacted by CalFresh EAs ending, that their responses would be kept confidential, participation was voluntary, and that they were free to withdraw or stop being recorded at any time. We received participants' verbal consent before proceeding. In accordance with guidance from Feeding America (2022), a nationwide network of food banks, food pantries, and local meal programs, participants were sent a $75 Visa gift card after completing the interview. We determined that IRB approval was not required for this compensation.

The interviewer de-identified, transcribed, and reviewed all audio files for accuracy and corrected transcripts as needed. Spanish and Chinese transcripts were translated into English via online translation services, labeled with only interview ID numbers (e.g., 1-21), and stored on a private server in a folder only interviewers could access. The project team members uploaded transcripts to Dedoose (2016), a qualitative data analysis software. Two researchers used an open coding process to identify major themes, sub-themes, and key findings, which were shared with research collaborators and advisors for refinement and finalization.

Results

Twenty-one participants accepted and completed interviews. Twelve interviews were in English, eight were in Spanish, and one was in Chinese. Participants' demographics are reflected in Table 1.

Table 1

Characteristics of CalFresh interview participants

Characteristic	Number of Interviews	
Age		
18-39	13	62%
40-59	4	19%
60+	4	19%
Language of Interview		
English	12	57%
Spanish	8	38%
Chinese	1	5%
Years on CalFresh		
3 months to <1 year	4	19%
1 to 3 years	8	38%
More than 3 years	7	33%
Used to get CalFresh	1	5%
Does not know	1	5%
Household Size		
1	3	14%
2	4	19%
3	8	38%
4+	6	29%
Has Children in Household		
Yes	16	76%
No	5	24%
Has a Disability		
Yes	9	43%
No	12	57%

Characteristic	Number of Interviews	
Receiving Other Programs		
Medi-Cal (Medicaid)	15	71%
WIC[1]	5	24%
SSI/SSP[2]	2	10%
CalWORKS (TANF[3])	3	14%
None	1	5%

[1]Special Supplemental Nutrition Program for Women, Infants, and Children
[2]Social Security Income / State Supplementary Payment
[3]Temporary Assistance for Needy Families

Interview participants reported a large range of experiences related to their receipt of EA benefits and overall experiences with CalFresh and food banks. For this brief, we focus on themes related to buying food, coping with financial stressors, and maintaining household stability before and after EAs ended. We excluded experiences that were outliers or unique to specific individuals. Due to the limited sample size, these findings cannot be generalized to all CalFresh or SNAP recipients; however, all quotes presented here were selected because they represent multiple participants' experiences, not just one.

Higher Benefits Enabled CalFresh Recipients to Buy More and Healthier Food

Interview participants described that while receiving EAs, they spent more money on food, buying foods of higher quality and nutritional value—especially fresh fruits, vegetables, and meats or other proteins—and worrying less about affording enough food. With EAs, CalFresh benefits covered a substantial portion of the monthly household food budget and enabled households to purchase healthier foods they could prepare from scratch.

It was a tremendous, huge weight off my shoulder because I was actually getting groceries, and I was getting a healthy meal and stuff that I find difficult to get on a normal basis.

It helped me [be] more proactive with buying healthy foods, and not just quick foods that I can just make. Because usually, I buy stuff that's kind of like what I make, you know, something quick. But with the help [of EAs], I was more focused on getting like veggies and you know, more healthy stuff.

When they gave the extra money, we were able to buy a little bit more [food] for the children.

Conversely, after EAs ended, participants found it challenging to buy enough food to meet their household's nutrition needs. The quantity and quality of food they could afford declined significantly because meat and other proteins, fruits and vegetables, snacks, and staples for scratch cooking were costly. Many switched to cheaper products, most commonly fast food/ready-to-eat meals, to save money. Some went back to skipping meals or reducing portions.

What has changed is that I'm living on shelf-stable items, for the most part.

Fruits and vegetables, what I can get out of a food bank I use, but oftentimes at grocery stores, I can't afford say, a lot of the fruit options I'd like, even just of the

frozen variety . . . Frozen fruit is something that I'd have to buy out of pocket now without my benefits. And it's just not something I can afford without them.

When we went back to eating a lot more fast food, I noticed that we all feel just thicker in a way. The food feels different in your stomach with all the grease. You can definitely feel that in your body.

We . . . eat breakfast later in the morning. After that, we eat dinner at five or six o'clock in the evening. So we just eat two meals.

Higher Benefits Enabled Recipients to Weather Financial Setbacks

Due to the timing of our study, many participants had been impacted by pandemic closures and other disruptions to their employment, consistent with national trends (Mabli & Dotter, 2023). Some participants reported their jobs as seasonal or precarious, with unpredictable schedules and pay. Others lost income due to health conditions, caregiving, or other events, but many were making concerted efforts to regain income through skill development or working through disabilities. They described higher CalFresh benefits as critical to helping them endure these challenging periods and keep food on the table until they could work or regain their income.

During this time . . . it was really tough. And then I didn't even have stable work. I was learning web development back then. So it was really, really tough. Sometimes we ate once a day.

> *I'm working two jobs. . . . because my salary is still not the way it was before. I have to work two jobs, I have to stretch myself and dig deeper, to just to keep my family floating in this inflated economy.*

> *Well, [getting EAs] was like, a blessing on my finances . . . a great relief for me. . . . You know, it was a dire moment, in the moment where I sought out ways to survive with my family. So it was a blessing on my finances to have that assistance coming in.*

Higher Benefits Contributed to Overall Household Financial Stability

Interview participants described how they were able to use more of their limited income to make other essential payments, such as rent and bills.

> *That was a very good chance for me to take good care of my kids and myself too, and also be able to catch [up on] bills that I had to pay and . . . not worry about where to get rent or how to take care of the kids, and how to put up some small meals.*

> *In my experience, this was a relief, a relief for my economy, for my family's economy; I imagine for many families as well. Because there was more, as they say, more food on the table, there was more tranquility, more respite on the food side, and obviously the funds that we save will help us to be economically well off in other things.*

Well, let's say I was helping myself, at that time I was helping myself with what they gave me for food. So from there . . . I used what I saved on the food—it was enough to pay the electricity bill, the water bill, and so I tried to compensate some things for others.

After EAs ended, interview participants described a return to a state of precarity, in which unexpected or even typical expenses led to uncertainty about having enough food.

It depends on the budget for that month. If there is special need for that month, maybe the car broke down . . . or there is an extra expense, then the budget for food would have to shrink a little bit.

My biggest expenses right now is all my money goes to the utilities, gas and light. I don't have money to get school clothes for my kids, and school shoes. Like, everything is going to the utilities and not towards the day-to-day needs.

I definitely feel much more stressed. And I just feel constantly worried. Just because I don't know . . .how bad the changes are gonna hurt until, like, maybe next month. I mentioned like, my credit card debt . . . it's gone up,and I think right now I'm trying to ignore it. But obviously, I'm gonna have to start, like payment and maybe seeing that it's going up and I'm not able to keep up.

I'm not spending money on anything. I don't have it to spend right now. . . . because I have less money available for food, so that's definitely very real. So I just, you know, I put gas in my car to go [to work]. I don't go to other places.

Discussion

Consistent with the existing literature on SNAP benefit adequacy, interview participants reported that having higher benefits improved their food and nutrition security, financial stability, and other markers of well-being. For example, participants described a direct link between higher benefits and the ability to purchase more, fresher, and healthier foods, which is supported by quantitative studies showing that higher SNAP benefits are linked with improved food security (Keith-Jennings et al., 2019; Ratcliffe et al., 2011). Participants also described how receiving EAs helped them survive periods of reduced income, aligning with studies that found that SNAP can buffer negative impacts during temporary or extended periods of financial strain (Chang et al., 2018; Cox et al., 2024; Ratcliffe et al., 2016).

Benefit increases have also been shown to free up resources for SNAP households to spend on other essential expenses (Kim, 2016). Indeed, participants in our study confirmed that having more money for food helped them stay current on bills and rent. Conversely, after EAs ended, interview participants described having to make difficult tradeoffs due to budget constraints, consistent with survey data showing that SNAP households nationwide experienced greater food hardship and difficulties paying household expenses during this period (Wells et al., 2024).

Qualitative data can also help illuminate potential mechanisms through which higher benefits lead to better outcomes. For example, evidence links SNAP participation with better health outcomes, particularly at higher benefit amounts (Gregory & Deb, 2015; Schanzenbach,

2023). Our findings highlight ways in which EAs improved food security, which has well-documented linkages with both physical and mental health (Cain et al., 2022; Gundersen & Ziliak, 2015; Leung et al., 2015; Pai & Bahadur, 2020). CalFresh recipients reported that when receiving EAs, they could purchase fresher and higher quality food, were better able to afford essential expenses, such as clothing or medication, and experienced less anxiety (Tan et al., 2024). In contrast, once EAs ended, recipients reported shifting to processed and lower-quality food, reducing overall food intake, working through physical injuries to earn income, foregoing self-care to afford food, and feeling more stressed and worried about the uncertainty of their food access.

Notably, study participants consistently linked the nutritious foods they could afford when they had EAs with improved health and well-being. Moreover, participants overwhelmingly expressed a desire to continue purchasing these foods for themselves and their families but faced cost barriers after EAs ended. Making fresh, healthier foods more affordable and accessible is key to improving nutrition security (Thorndike et al., 2022). Findings from this study support higher SNAP benefits as a strategy to improve both affordability and access to nutritious foods for people with low incomes, as multiple participants indicated that they could make healthier choices while receiving EAs.

Conclusion

At a time when policymakers are considering cuts to SNAP benefits, time limits on eligibility, and restrictions on the foods people can purchase, our research suggests that objectives such as improvements in health and longer-term stability were partially achieved when participants were receiving *more*, not less, in SNAP benefits. Households used the additional funds to purchase healthier food and were better able to manage their lives; only after

a reduction in benefits did they resort to purchasing cheaper and less healthful foods. Similarly, recipients described the period of higher benefits as one in which they could focus on treating health conditions or developing skills—in other words, addressing the root causes of a lack of food security (Plata-Nino, 2025) that can set households up for longer-term success.

Reflection

We chose a mixed-methods approach for the main study because administrative and survey data alone (what was available about EAs through CDSS and/or national and state-level datasets) do not fully illustrate the lived experiences of CalFresh recipients, such as the context behind their use of CalFresh and the strategies and resources that help them navigate difficult circumstances. By collecting qualitative data from people experiencing challenges to food security, we aimed to illuminate how common and relatable many of the circumstances preceding these challenges were and to demonstrate the impacts of benefit sufficiency on various aspects of life.

As part of our trauma-informed approach, data collection began by conducting focus groups with outreach workers (as part of the larger study) to develop a baseline understanding of what people were facing, which informed our interview process and helped us avoid unnecessary or insensitive questions in our interviews with CalFresh recipients. A safe interview environment was created by providing participants with as much detail as possible about the process up front, not collecting personally identifiable information, and conducting interviews in the participants' preferred language. We also scheduled interviews at the participants' convenience and compensated them for their time.

This project helps advance equity by centering the voices of people directly impacted by SNAP policy and adding their lived experiences to the evidence base about SNAP. The project

could have been improved by including CalFresh recipients in the conception and design of the study to help ensure that their research priorities were incorporated. Since completing this study, CAFB has been working with a community advisory board that guides our research agenda and methods. There was no opportunity for this research team to interview participants while receiving EAs, which could have yielded examples of more proximal experiences. If opportunities arise to examine future boosts to SNAP benefits, qualitative methods would be particularly valuable for capturing real-time impacts; they could help surface key differences in experiences among subgroups.

These findings reflect a subset of SNAP participants in a single state and cannot be generalized across all CalFresh households or SNAP households nationally. However, the themes that emerged are consistent with patterns found in quantitative literature and help illustrate several aspects of the transformative impact that EAs had on CalFresh households—in particular, how participants' health and well-being improved when their benefits approached adequacy. Their experiences add to our understanding of how SNAP touches lives and strengthen the rationale for protecting, rather than restricting, access to SNAP for households in need.

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