

## **Understanding Consumer Perceptions of an EBT Incentive at a Student-run Grocery Collective in Berkeley, California**

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### **ABSTRACT**

SNAP incentive programs aim to make produce more accessible for SNAP users, who are shown to purchase and consume less fruits and vegetables than food secure individuals. However, a majority of these incentives are offered at farmers' markets, which may not be accessible, convenient, or welcoming for SNAP users. This study investigated the use of an EBT incentive program called Fresh Creds offered at the Berkeley Student Food Collective, a nonprofit student-run grocery store in Berkeley, California. I collected 26 survey responses, conducted 5 participant interviews, and used storefront purchase data to illustrate trends and correlates of program use. I found that the convenience the storefront offers was the most important factor for storefront shopping, cited in 25 survey responses. However, I also found that this view of the BSFC as a convenience-style store limits the applicability of produce-centered programs. In most ways, program use was more limited by weaknesses of the storefront, while the program itself is generally appreciated. In agreement with existing literature, the incentive program offered at the BSFC is overall underutilized, making up 7% of total SNAP purchases. Program use could be increased with increased advertising, but greater use of the program will likely be best achieved through changes to the storefront overall. Greater product consistency and cultural inclusion of foods will likely bring in more customers and subsequently, lead to greater incentive use.

### **KEYWORDS**

Food security, Berkeley Student Food Collective, SNAP, CalFresh, nutrition.

## INTRODUCTION

The Supplemental Nutrition Assistance Program is one of America's most widely recognized federal programs addressing food insecurity. The program provides eligible individuals with monthly allotments for food, administered through an Electronic Benefits Transfer (EBT) Card (CDSS 2024). SNAP has been repeatedly shown to improve food security outcomes (Ratcliffe et al. 2011, Malbi and Ohls 2015). However, program participants and researchers have identified several limitations of the program. The distribution of benefits through monthly allotments leads to increased spending at the beginning of each month, termed as a “SNAP benefit cycle” (Smith et al. 2016). This trend is exacerbated by the fact that monthly benefits are often not enough to fully support one’s self, especially for SNAP recipients who are the head of a household and must feed a whole family with their benefits (Caswell et al. 2013). Clearly, SNAP benefits alone are insufficient for many program participants. As a result, SNAP recipients often employ multiple strategies to access food, such as borrowing money, buying in bulk, using food pantries, and using other forms of income (Gorman et al. 2017, Smith et al 2016). In order to maximize the value of SNAP benefits, shoppers may prioritize cheaper foods, which are often processed, calorie-dense foods (Drisdelle et al. 2020). Increased intake of highly processed foods has been associated with chronic health outcomes like diabetes, hypertension, and cancer (Dai et al. 2024). As a result, these health outcomes have also come to be associated with food insecurity and SNAP use (Gregory and Coleman-Jensen 2017).

EBT incentive programs were created to address some of these chronic health outcomes (Gosliner et al. 2022). These programs work by providing SNAP recipients with incentives to purchase fresh fruits and vegetables (FV) in the form of discounts or vouchers. Many of these programs have been designed and implemented at farmers’ markets (Vericker et al. 2021). Researchers have studied farmers’ markets where these programs are offered in order to evaluate their effectiveness. While the findings are promising, a generally recognized trend is the slow uptake of program use (Gosliner et al. 2022, Cohen et al 2018). Additionally, programs are often used by a smaller pool of repeat customers (Greenwald et al. 2022). Some research has focused on identifying the differences between those who use incentive programs and those who don't, and the barriers to program use they experience (Blumberg et al. 2022). Understanding the barriers to program use can help tailor these programs to participant needs.

Many barriers to program use have been identified as broader barriers to farmers' market shopping for SNAP users. Several research studies have found that low-income and SNAP shoppers may not find farmers' markets welcoming (Colasanti et al 2010, Ritter et al. 2019). Part of this trend is associated with lack of awareness of EBT acceptance at farmers' markets (Milott 2016). Other barriers have to do with practicality; seasonal or weekly farmers' markets may not be a realistic primary food source for working households, especially if market times coincide with working hours (Savoie Roskos et al. 2017). Another related barrier is transportation. For those without access to a car, FM shopping is not practical if it is not located near public transportation. Affordability and convenience are other significant barriers to FM patronage. All these barriers make incentive programs less effective, since they keep SNAP shoppers out of farmers' markets. The literature on farmers' market pricing is varied, with some studies finding FM produce more affordable than at grocery stores, and some finding it less affordable (Hewawitharana et al. 2022). Regardless, it's clear that the perceived barriers, whether justified or not, have a significant impact on the decision to shop at the farmers' market. Farmers' market shopping is also often seen as inconvenient because of location or because you often can't get all your groceries there. In terms of barriers specific to incentive use, researchers found that some programs are difficult for shoppers to use. For example, a Michigan-specific nutrition incentive requires shoppers to pick up vouchers at one location in a limited time frame, and then make more time to go and spend them at the farmers' market (Colasanti et al. 2010). There is a lack of research on EBT incentives outside of farmers' markets. It's possible that moving these programs to other settings may address some of these barriers and increase incentive use.

The purpose of this study is to understand how consumer perceptions of setting may affect the use of EBT incentive programs by SNAP users. In particular, I investigate the Fresh Creds incentive program offered at the Berkeley Student Food Collective in Berkeley, CA. In order to understand program use, I look at how consumers perceive the BSFC as a whole, then look more specifically at how they view the program offered. Finally, I look at consumer program use to determine the effect of the BSFC's setting. To do so, I administered an online survey regarding program use and perceptions of the BSFC. I also conducted participant interviews to deeper understand survey trends. Finally, I used consumer data from the storefront to corroborate trends of consumer perceptions with program use data. I expect to find that the setting of the BSFC directly addresses some of the barriers cited in the literature specific to farmers' markets, but may

not address all barriers to program use. In line with the existing literature on EBT incentives, I expect to find overall low program use, with a dedicated small user base. Understanding how consumers view and use these programs is essential to ensure the efficacy of these incentive programs and their broader evaluation.

## BACKGROUND

### Study site

The Berkeley Student Food Collective is a non-profit student-run grocery collective in Berkeley, California. It is located at 2440 Bancroft Way #102, just one block off the UC Berkeley Campus. According to the BSFC website, the organization is “dedicated to providing fresh, local, healthy, environmentally sustainable, and ethically produced food at affordable prices to the Berkeley campus and greater community” (Noven 2024). Because of its location, we can identify the BSFC as a primarily student-serving storefront. Although non-students shop at the storefront, students are the focus of this study due to its local context. The store accepts EBT as a payment type, and processes a significant amount of EBT transactions as its primary revenue. In addition to operating a grocery storefront, the organization works to educate its members and local community about food system struggles and labor organizing. It’s also a recognized student organization with over 100 members. The organization was founded through student efforts as a protest against the proposal of fast food chains like Panda Express on campus. Unsatisfied with campus food plans, students campaigned for greater control of their local food system, opening the storefront in 2010 (Sako 2019).

This organization’s work is especially salient given the prevalence of food insecurity at higher education institutions. A 2024 survey found 43% of UC Berkeley students experiencing some level of food insecurity (University of California, 2024). Growing bodies of research have investigated university student-specific experiences with food insecurity. Student food insecurity has been associated with lower grades and poor mental health (Meza et al. 2019). University student experiences with food insecurity are unique from the experiences of other working adults due to their different living situations, including dorm living, student debt, and limited

transportation (Mccoy et al. 2024). There is a need for student-specific interventions to improve student food security outcomes.

I chose the BSFC as my study site due to the incentive program the storefront offers, called Fresh Creds. Fresh Creds is an EBT incentive in which SNAP users earn an instant 50% discount on CA-grown produce, saving up to \$10. It's offered through Mandela Partners, a local nonprofit that works with businesses to further equity and sustainable business practices for local Bay area businesses (Mandela Partners 2022). The EBT incentive program offered at the BSFC is unique due to the nature of it being offered outside of a farmers' market. In order to understand the implications of an EBT incentive program offered outside of a farmers' market, we must first understand the existing literature on EBT incentives as they exist.

### **EBT incentives in the literature**

Research on EBT incentives constitutes a small but growing pool of literature. These incentive programs are offered in many forms across America, often funded by the Gus Schumacher Nutrition Incentive Program (Krieger et al. 2022). It is essential to evaluate these programs in order to ensure that these programs are achieving their intended goals of food equity and food security. The findings of this literature are diverse, with the effects of these programs ranging greatly in their significance. A common finding is that the use of incentive programs is associated with higher produce purchases (Olsho et al. 2016). This is not always true; some studies have also found no difference in produce purchases (Wilde et al. 2016). One explanation for this trend is the idea of people using programs to buy their normal produce, which "frees up" the rest of their benefits for more other groceries. Though this may not be the intended effect, increased food access is overall a positive finding. Another nuance of this finding is that some studies have found that increased produce purchasing is not the same as increased consumption (Bihan et al 2012).

Another key finding is the improvement of overall food security outcomes. The ranges on this one are diverse, with studies finding from marginal to no increase in food security, with others finding drastic improvements (Dimitri et al. 2013). However, possibly the two most important findings from the existing literature on incentive programs are twofold: those who use the programs appreciate them, but program uptake is often slow (Gosliner et al 2022). Most

studies that include an investigation of consumer perceptions of incentive programs find overwhelmingly positive perceptions of the programs (Rockler et al. 2020).

As aforementioned, there are several existing barriers to incentive use and retention. Some of these include time constraints, transportation, and ease of program use. These concepts may be grouped together under the broader concept of convenience. Convenience has been cited over and over again in the literature as a significant barrier to FM shopping for SNAP users and other low income shoppers (Kunkler et al 2023). Most SNAP users get a majority of their produce from supermarkets; farmers' market shopping is out of the way, disrupting routines (Dimitiri et al. 2013). Even markets offering incentives may not be enough to overcome these barriers (Rockler et al. 2020). In order to maximize the accessibility and use of incentive programs, the programs should be designed to be as convenient as possible. However, the literature suggests that certain barriers to use are inherent to the settings in which these incentives are provided. Therefore, investigating these programs in different settings may lead to different patterns of use. The BSFC's setting and unique program presents a compelling case for study.

### **Study approach**

The BSFC is located near the UC Berkeley campus, and is open 7 days a week. It offers a higher diversity of products than a farmers' market. The incentive itself, Fresh Creds, is an instant discount requiring no action from the consumer. Being student run, with a quirky instagram page, the storefront is also welcoming to students and SNAP EBT customers. Overall, the BSFC makes for the ideal study site for an investigation of an EBT incentive like Fresh Creds. However, these factors also make the BSFC a unique study site. There aren't many other nonprofit student-run grocery collectives in CA. It may not be feasible to generalize results from a study of this site to other grocery stores. As a result, I decided that a case study approach would be most effective for this research. A case study approach allows for an investigation of the site, with full consideration of the factors that make it unique (Bhattacharjee 2019). I did a triangulated data collection approach, similar to that of Greenwald et al. 2022, in order to corroborate social findings with empirical data.

## METHODS

### Survey

To understand consumer perceptions of the Berkeley Student Food Collective and its program Fresh Creds, I designed an online survey using Qualtrics. I distributed the survey through on-campus flyers, in-store signage, and through the Berkeley Student Food Collective Instagram. Survey distribution began in February, and I closed the survey in April. The survey consisted of 14 questions, and was designed to take less than 10 minutes. I chose to make all questions optional due to the survey's focus on consumer experiences with SNAP, as well as the collection of demographic questions. These themes may be considered sensitive, so the creation of optional questions was to ensure participant comfort while responding. The survey consisted of three main question sections: a set of multiple choice questions, a likert matrix, and a set of demographic questions.

The first section of multiple questions included questions to determine baseline consumer knowledge regarding the program. This section asked respondents how they learned about the program, as well as how long they had known about it. It also asked how often they used the program. The likert matrix consisted of 10 statements, to which respondents assigned a value from 1 to 5, with 1 as "strongly disagree" and 5 being "strongly agree." These questions focused more on consumer perceptions of the storefront and the Fresh Creds program. The likert statements focused on consumer perceptions of favorable qualities of the storefront, like convenience, accessibility, affordability, and cultural relevance. There were also a few statements to evaluate consumer understanding of the program through knowledge of how it's used or what is eligible for the product discount. These factors were evaluated because they are often cited in the literature as existing barriers or facilitators of the use of EBT incentive programs (Freedman et al. 2016).

Demographic questions focused on student status and cultural identifiers. Respondents who answered "yes" to a question asking about student status at UC Berkeley were also prompted to answer what division of student they were (undergraduate, graduate), if they were a transfer student, as well as what college their degree is in. The survey also asked respondents if they were a member of the Berkeley Student Food Collective. Members of the BSFC volunteer

in the storefront, and may feel a greater stake in the organization's work. They also receive a 15% discount on all storefront purchases, which may influence their perceptions of affordability of storefront products. Finally, other demographic questions asked for race and gender, as well as if they were Hispanic/Latino.

I analyzed survey data with Qualtrics tools. I created graphs by exporting data to Microsoft Excel. I most commonly used averages to analyze my data, especially for the likert questions. I also found the median value, standard deviation, and range of each questions' responses. Due to the small sample size (<30), I didn't use linear regression to find trends. However, I used Qualtrics's Stats iQ function to create data visualizations and run statistical tests of ranked ANOVA and chi-squared tests. I also manually made comparisons between variables to determine trends, like to compare the perceptions of culturally relevant foods at the storefront by ethnicity.

## **Interviews**

To understand survey responses more deeply, I also completed 5 interviews. I recruited interview participants in the last question of the survey, which optionally asked participants to provide contact information for an interview. I offered a \$10 BSFC gift card to interview participants in order to incentivize responses. Interviews were semi-structured, allowing for more natural conversation in order to prioritize participant comfort. I chose a semi-structured approach also due to the sensitivity of topics in the interview. Again, SNAP experiences can be an uncomfortable topic for some, so the semi-structured interviews allowed participants to skip questions they didn't feel comfortable answering. Interviews took around 30 minutes each, and were completed over Zoom to allow for live transcription and cloud recording. I formulated interview questions to allow respondents to elaborate on their perceptions of the BSFC and Fresh Creds. I wanted to understand what kinds of products respondents buy at the storefront, and what they think of the Fresh Creds program. I also included additional questions about the participants' general experiences with SNAP in Berkeley. I coded interviews for emergent themes using Taguette. I developed codes focusing on three main topics: consumer perceptions of the storefront, consumer perceptions of Fresh Creds, and consumer experiences with SNAP/EBT. I used thematic coding principles to develop my codes. I created very specific codes



to organize interview transcripts, and used my overarching three topics to generalize my codes into broader sub-themes.

## **Secondary data**

In order to find out how often consumers use this program, I accessed consumer data from the Berkeley Student Food Collective's point of sale system, Clover. I accessed data from August 2023-March 2024. I also used Clover's reporting feature, which generates data summaries based on set parameters. I mostly used the "Discount Report" function, which allowed me to look at all the transactions that had Fresh Creds discounts applied to them. I exported this data to Microsoft Excel, and used it to generate graphs and analyze trends of use over time. I used pivot tables to summarize monthly trends. I also analyzed data to find the number of purchases including a Fresh Creds discount, and also compared this figure to the number of total purchases made by SNAP users in order to understand the prevalence of program use. In addition to counts of purchases, I looked at proportions of purchases with the discount applied to it to account for the fluctuations of monthly purchases.

## **RESULTS**

### **Survey responses**

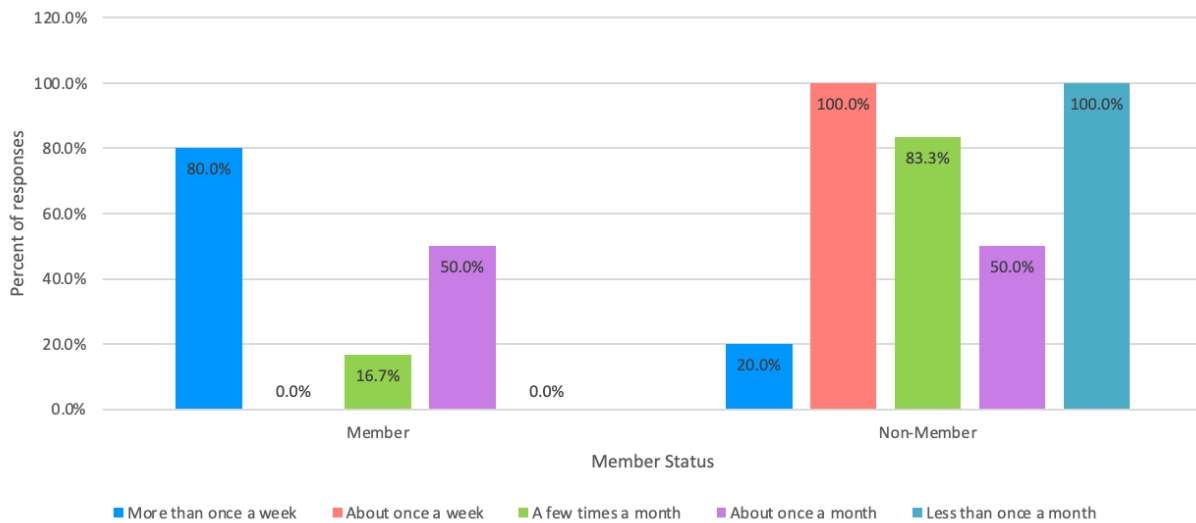
The survey received a total of 26 responses. Of those responses, 24 identified themselves as UC Berkeley students. All student respondents were undergraduate students. Most students who responded to the question regarding their college reported being in the College of Letters and Sciences (n=15), followed by the College of Natural Resources (n=6). Of the respondents, 13% identified as male, 71% as female, and 17% as another gender. Of the survey respondents, 52% identified themselves as Hispanic or Latino, 45% as White, 55% as Asian, 10% as American Indian, and 10% as other. Six respondents did not select a race. No respondents who identified their race were Pacific Islanders or African American. Finally, 7 respondents were members of the Berkeley Student Food Collective. This overlap is significant because members obtain an additional 15% discount on store purchases, which could contribute to program loyalty.

Most respondents had known about Fresh Creds for 6+ months (n=14, 54%). I found that in-store signage and social media were by far the most effective ways to advertise the program. Notably, two respondents chose the “other” option and said that they learned about the program through the survey itself. In terms of shopping habits, 46% (n=12) of respondents reported shopping at the storefront a few times a month. The second most common response was “more than once a week,” with 19% (n=5) of responses. Responses of “about once a week,” “about once a month,” and “less than once a month” each got 12% of respondents (n=3). In terms of use of the Fresh Creds program specifically, most respondents reported obtaining the discount “once in a while/rarely when I shop at the BSFC” (n=11, 42%). There were 5 responses for “never,” and 5 responses for “every time I shop at the BSFC.” The most commonly reported reasons for respondents to shop at the BSFC were: “Convenient location,” “accepts EBT,” and “support small businesses,” with 25, 23, and 15 responses, respectively. For this question, respondents were asked to select their three most important factors, but 8 respondents chose more than three responses.

The Likert matrix had a very dense array of responses. The matrix can be broken down into responses on consumer knowledge of Fresh Creds, perceptions of Fresh Creds, and perceptions of the BSFC storefront. As mentioned, factors of the storefront evaluated include accessibility, affordability, and acceptability. Understanding of the Fresh Creds program was mixed. A statement stating “I know how to obtain the Fresh Creds discount” had an average likert response of 3.12. The statement “The Fresh Creds discount helps me afford more produce” got an average response of 3.40, with the most responses being 3 (n=11), the neutral value. Statements focusing on accessibility of the storefront had strongly positive responses. These statements focused on the storefronts location, its accessibility, and its hours. All three of these statements had an average score of 4 or above. However, two statements on affordability had less positive responses. The first statement read “The products at the BSFC are generally affordable for me.” The average score of this statement was 2.96, with the most responses of 3 (n=8). The next statement reads similarly, but about produce. The average response was higher at 3.56, with 3 and 4 values each getting 8 responses. Finally, two statements focused on the acceptability of food, focusing on product quality and cultural relevance. The average scores for those two statements were 3.56 and 2.80, respectively.

The comparisons I made between surveyed variables yielded interesting responses. I compared BSFC membership status to the frequency of shopping at the BSFC, as well as to the

frequency of obtaining the Fresh Creds discount. A chi-squared test comparing membership status to the frequency of shopping at the BSFC yielded a p-value of 0.0359, a statistically significant result. This result is constrained by the small sample size, but it does show that members shop more frequently at the BSFC (Figure 1). However, member status was not correlated with more frequent use of the Fresh Creds discount through a ranked ANOVA test (p=0.985). Furthermore, knowledge of the program for longer periods of time was not associated with increased use in a chi-squared test (p=0.346).



**Figure 1. Member Status and Shopping Frequency.** Members of the BSFC were most likely to shop at the BSFC more than once a week.

Going beyond statistical models, I observed some other general trends in the data. A chi-squared test found no significant correlation between respondent ethnicity and their perception of culturally relevant foods at the BSFC. However, 100% (n=3) responses to the statement “I can find foods from my culture at the BSFC” that were ranked as 1 were from Asian respondents. The average rating of that statement from self-identified Asian respondents was 2.45 out of a Likert scale with 5 being “strongly agree.” Additionally, the average response to that same statement from self-identified Hispanic/Latino respondents was 3. No other racial or ethnic groups had significant numbers of responses to the survey.

**Interview Themes**

I categorized emergent interview themes into three broad categories: consumer perceptions of the storefront, consumer perceptions of Fresh Creds, and consumer experiences with SNAP/EBT.

*Storefront perceptions*

Consumer perceptions of the storefront as discussed in interviews can be broken down further into two subcategories: causes and effects (Table 1). Interviewees commonly discussed factors that affect their shopping habits. However, these factors were discussed distinctly from the discussion of actual shopping habits. This distinction is why I decided to break down this theme into causes and effects.

**Table 1. Interview themes for consumer perceptions of the BSFC storefront.** Alternating colors indicate responses from different interviewees.

Finding	Themes	Quotes
<b>Factors affecting storefront perceptions</b>	Affordability	"I think if I didn't have EBT. I probably wouldn't shop there as often. Just because I do notice that certain things are pricier." "I think that they could do a little bit better of a job at making things a little bit more affordable." "I just find that the produce especially... like fresh foods like are typically cheaper at other grocery stores." "The price range is completely fine. I think it's really good."
	Organizational Work	"I love the Instagram and the social media outreach...and then I also enjoy that it's student run" "A lot of the students that are involved there are also involved with like community gardens and student farms, and it's nice to see some familiar faces." "I think it's cool that like students can work there. And...like have leadership roles within the Food Collective" "I've met a lot of people there and they're really nice and every like interaction is very sweet and I just think really reinforces community, you know." "It's like actually like a small little world in there" "I think it does like community pretty well."

Convenience	"I don't go grocery shopping as often, but when I do I do go to the Food Collective just because it's convenient. It's right off of like south side of campus." "Before I was living in an apartment on southside, so it was just like...en route to class." "The convenience is obviously like a really good thing" "It provides like what you need for the time being." "The location is a super prime" "Definitely for like a quick bite" "[A barrier] can't be convenience, because it's like right there."	
Product Diversity	"If we had a bigger frozen section, but like with frozen meals that students would be able to eat more." "more ethnic products in general [would] be good." "I think if it had more like... universal staples" "People kind of want the...basic American loaf of bread, sliced sandwich bread you know and not necessarily a big baguette or something like that." "You won't find every single I don't know, grocery item or produce item that you're looking for" "I think it could be maybe a little more consistent." "A bigger and wider selection of produce that's like the only reason why don't use it I think" "I don't think that they're like missing from a certain ethnicity or like identity" "But I also like that they like rotate things out occasionally."	
<b>Finding</b>	<b>Themes</b>	<b>Quotes</b>
<b>Effect on shopping habits</b>	Shopping at other grocery stores	"Berkeley Bowl feels more like a one stop shop" "Sprouts is just like a bigger version... everything's kind of like organic and more or less local." "I never go there and seek out a specific item if I think they might not have it. I'd go somewhere else."
	Buying predominantly convenience foods	"I don't normally buy like groceries like to make food at the Berkeley Student Food Collective." "So when it comes to like making like or like buying pre made meals I prefer to buy at the Food Collective." "It's not like a grocery store, but...for the space that it is I think they carry a nice variety of things." "Whenever I shop at the collective, it's mostly like out of convenience because it's so close to campus" "We often go there for lunches and and beverages during the work hours."

Causes included discussions of other previously mentioned factors: location, affordability, organizational work, convenience, and product diversity. Notably, location and affordability were cited as both barriers and facilitators to shopping at the storefront by different people. Effects referring to shopping habits largely had to do with the types of products interviewees purchase, as well as their other grocery shopping habits. The goal of the “effects” subtheme was to identify the effect of storefront perceptions on reported shopping behaviors.

### *Experiences with SNAP*

Interviewees had diverse perspectives on their experiences with SNAP (Table 2). A

recurrent theme was the significant positive impact of SNAP on those who accessed it. Interviewees emphasized its impact on their ability to afford food. However, a common experience was frustration with the process of obtaining or renewing one’s SNAP benefits. In particular, the SAR-7, a SNAP renewal form, was mentioned multiple times as frustrating, sometimes even causing a pause in one’s benefits.

**Table 2. Interview themes for participant experiences with SNAP.** Alternating colors indicate responses from different interviewees.

Themes	Quotes
Improved food affordability	"Being low income, that was a huge help to me" "And I didn't really have to worry about the price because ...I never spent more than what I had"
	"It's been...tremendously helpful in affording groceries." "When I go grocery shopping, I pretty much have like the peace of mind of being able to afford most things"
	"In a broad sense, it's a lifesaver when it comes to buying groceries and keeping a budget"
Frustration with application process	"The people that are like your case workers and stuff like that for your EBT, they are not responsive a lot of the times and it can be pretty hard to reach them even if you try calling in or emailing"
	"The customer service and like the accessibility of it is like super bad." "Just because it takes so long for them to like read the SAR-7, I actually get my benefits denied for like a month and then I have to reapply."
	"And like, yeah, I had an income change. So I'm not quite sure if I'm eligible still."
	" it's been on and off because I forget to...to do the SAR-7."
Food Access strategies	"I always try to like stretch my EBT as much as possible" "So I try to make sure that like my money lasts as long as possible like I don't want to go under a hundred dollars." "Around once a month, me and my friends wil like share a gig car and have to drive to like...99 ranch, or we'll go to also Trader Joe's."
	" I just like how things come in bulk [at Costco] You get like a lot of bang for your buck."
	"I think I might be interested in in like bulk."
	"I normally buy in bulk, so that's why I go to costco" "I know that I have a budget every month, so it makes me not overspend like on snacks and things that I really don't need."
	" I like being able to buy things in bulk there [Berkeley Bowl]."
	" When I didn't have SNAP, and I would like stretch things out like I would, I remember like I would only eat beans and like...I'd buy like things that last a while."
	"Without like a a small 200 plus dollars per month on groceries, we can get creative with visiting the community gardens for like fresh locally grown organic produce."

Participants often discussed how they used their SNAP benefits, and how they coped when they didn’t have access to them. A common theme was the idea of “stretching” one's benefits, or otherwise trying to maximize the value of benefits. Strategies mentioned include budgeting, buying in bulk, and shopping at multiple sites for food.

*Fresh Creds*

Finally, conversations about the BSFC’s Fresh Creds coalesced around two sub-themes: positive perceptions, and a lack of awareness of the program. Those I interviewed who had obtained a produce discount through the program expressed enthusiasm for the program. However, several interviewees also mentioned not knowing much about the program or at all, with one person in particular who noted that the survey was the reason they learned about the program.

**Table 3. Interview themes for Fresh Creds.** Alternating colors indicate responses from different interviewees.

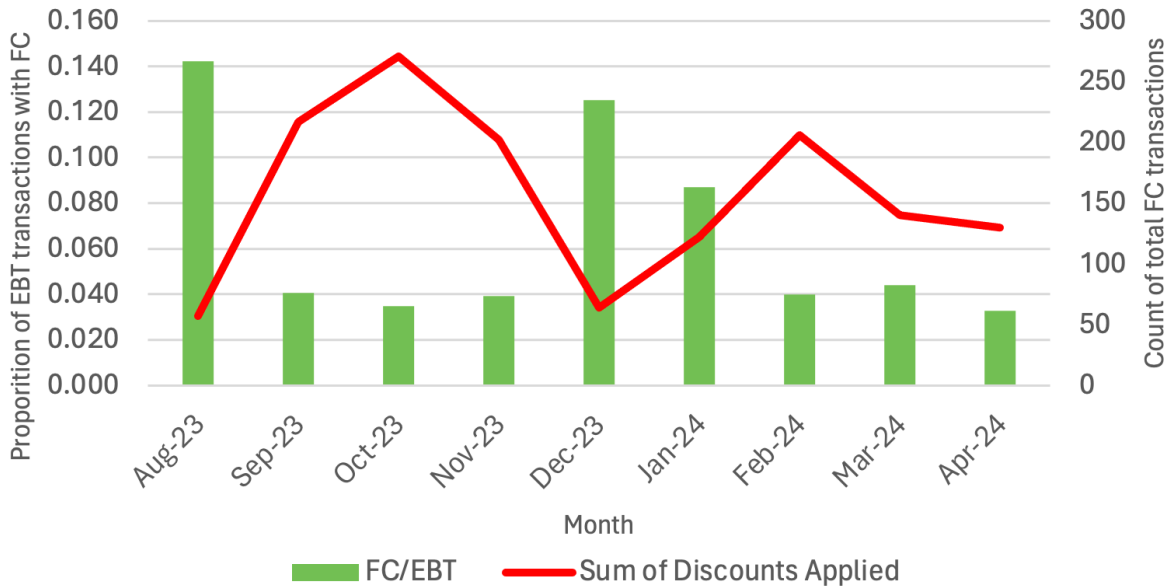
<b>Themes</b>	<b>Quotes</b>
Appreciation for program	" I'm a big fan and I think it helps to encourage low income [shoppers] so they come and get their produce there."
	"I have used it just not too often, but I do enjoy it. I think it's a nice thing to implement."
	"I just like having a direct access to 50% off."
Lack of knoweldge	"That would probably encourage me to buy produce from there more often."
	"Actually your survey was the 1st time I'd heard about the Fresh Creds program. Even though I had gone like so many times."
	"I'm literally a member there and I just forgot about it."

**Secondary data**

The first recorded transaction containing a Fresh Creds discount occurred on August 28, 2023. For the sake of simplicity, I looked at storefront data from all of August 2023 to the end of April 2024. In that time, the storefront saw 27,930 total transactions. Of those, 10,469 were completed using EBT. Of those transactions made with EBT, a mere 735 included a Fresh Creds discount. A total of 1409 total Fresh Creds discounts were applied to transactions, yielding an average of 1.9 FC discounts per transaction. The proportion of total EBT transactions containing a FC discount was 0.07. The average discount amount per transaction was a modest \$3.14. Notably, the maximum discount ever applied was \$29.86, well above the daily \$10 maximum. I hoped to find the number of unique EBT cards that had used the discount in order to determine trends of repeat customers, but the dataset didn’t record EBT card numbers. Over this time period, the most popular category of products sold was beverages, followed by grocery snacks. Produce was the

third most popular category of products sold. EBT was also the most commonly used payment method, accounting for 37.4% of transactions.

The total number of FC discounts administered decreased from the fall semester (August-December 2023) to the spring semester (January-April 2024). However, storefront sales overall decreased over this same timeline. To account for this difference, I calculated the proportion of total FC discounts relative to the total number of EBT transactions in that same time period, and the visual difference is stark (Figure 2). Although the number of Fresh Creds discounts goes marginally down over time, the proportion of discounts remains relatively constant and low. The spikes in August and December/January correspond to periods of no class, in which the storefront is closed.



**Figure 2. Fresh Creds Discounts.** The proportion of monthly transactions containing a FC discount relative to total EBT transactions remains relatively consistent during the academic years compared to counts of monthly FC discounts.

## DISCUSSION

The current literature on EBT incentives is largely dominated by research at farmers’ markets, where these incentive programs were created. However, the literature shows that SNAP users face significant barriers to shopping at farmers’ markets, and therefore, barriers to making



full use of the EBT incentives offered there (Freedman et al. 2016). The goal of this study was to look at an EBT incentive in a different setting in order to better understand consumer perceptions of the incentive outside of a farmers market. My findings starkly contrast the existing literature on barriers to EBT incentive use. Namely, the effect of convenience on shopping at the BSFC has significant positive impacts. However, the unique setting of the BSFC poses unique challenges to program use and implementation. Serving mostly students with unique lifestyles in such a small storefront poses difficulties in maximizing storefront offerings. Here, I recommend increased advertising and product standardization at the BSFC to increase program knowledge and appeal, as well as challenge the implementation of incentive programs as feasible food security interventions.

### **Facilitators of BSFC shopping**

Based on interview findings, it's clear that most consumers don't shop at the Berkeley Student Food Collective as their primary grocery store. Interview respondents highlighted the popularity of the BSFC for lunch and snack foods, corroborated by the dominance of these categories in sales. Produce is only the third most popular category of items sold. This perception stands in stark contrast to existing literature on EBT incentives at farmers' markets, where convenience is cited as arguably the largest barrier to entry (Savoie Roskos et al, Ritter et al). Clearly, consumer perceptions of the storefront have measurable effects on how consumers shop. Participants viewing the Berkeley student Food Collective as more of a convenience-style store than a full-on grocery store limits the effect of produce-centered incentives.

Another factor with considerable effect on consumer decisions to shop at the BSFC is the storefront's acceptance of EBT transactions. The fact that EBT is accepted at the storefront is a largely known and advertised fact at the BSFC. In the survey, it was listed as the second most important reason for SNAP users to shop there. This understanding of the BSFC's acceptance of EBT appears to bring in SNAP users, who comprised 37% of storefront transactions. Generally, SNAP funds cannot be used on hot prepared foods, which constitutes many of the food offerings near the UC Berkeley campus. The BSFC's diverse lunch offerings appear to increase food access for SNAP users because the BSFC is one of few sites near campus where students can buy lunch using EBT. Therefore, these lunch offerings are unique, creating a consumer niche of SNAP

shoppers at the storefront. The popularity of EBT transactions at the BSFC is another finding contrasting existing literature on EBT incentives, especially at farmers' markets. One barrier to farmers' market shopping for SNAP users is that many shoppers don't know that some farmers' markets accept EBT (Savoie Roskos et al. 2017). The prevalence of EBT transactions at the BSFC suggests that this barrier is not experienced at the BSFC.

Another interesting finding has to do with the BSFC as an organization. As a nonprofit community organization, the BSFC's work is rooted in their mission statement of "providing fresh, local, healthy, environmentally sustainable, and ethically produced food at affordable prices to the Berkeley campus and greater community" (Noven 2024). It's also a student organization where students volunteer. As a result, some people are drawn to shop there due to its mission. We can see this reflected in the emergent theme of BSFC in the community from the interviews. Several survey respondents selected "support small businesses" as a top reason to shop at the storefront. It was the third ranked reason overall, with 15 responses. Clearly, the BSFC offers value to its shoppers beyond what it physically offers as products in the storefront. The perception of BSFC as a sustainable environmental organization appears to have an effect on the consumer demographic. A French study found that food insecure individuals gave environmental concerns less consideration in their food values (Verdeau and Monnery-Patris 2024). However, other research suggests that SNAP shoppers appreciate farmers' markets programs because of their connections to the community (Caron-Roy et al. 2022). These findings suggest that SNAP users have complex relationships with food values that should be explored further. The effect of membership of the BSFC on shopping behavior is also clear. BSFC members were more likely to shop more frequently at the storefront than non-members. Members had a significant response rate to the survey and interviews. It appears that members feel a stake in the work of the BSFC, which not only influences their decision to shop there, but incentivizes them to make their voices heard in a research study. Also, members of the BSFC get a 15% discount on all storefront purchases. Members who also use SNAP could combine these discounts to further maximize their SNAP benefits.

### **Barriers to BSFC shopping**

While several factors seem to draw consumers into the storefront, it's equally important to note what factors may be driving consumers out. I observed three main barriers to shopping at the BSFC, especially when it comes to utilizing the incentive program offered there: lack of product diversity, product inconsistency, and unaffordability.

The average response to the survey question asking respondents whether they could find cultural products in the storefront was 2.80 on a Likert scale, out of a maximum agreement value of 5. Of those respondents, Asian respondents had an average response of 2.45 while Hispanic respondents had an average response of 3. UC Berkeley's undergraduate population is 33% Asian and 23% Hispanic/Latino (University of California 2024). These groups make up a significant portion of the student population, so they should be reflected in the BSFC's offerings. Newer food security frameworks include the idea of acceptability as a factor of food security. These frameworks acknowledge the cultural value of food, and that access to cultural foods may be important to food security and wellbeing to support one's cultural identity (Diekmann et al, Hammelman & Hayes-Conroy). If shoppers at the BSFC don't feel that they can access foods from their culture, the storefront isn't truly addressing all pillars of food security in its practices. Lack of cultural inclusion at the storefront could be stifling consumer engagement with the storefront and its programs. However, it's important to note that some interview respondents felt that the storefront had adequate cultural offerings. Consumer experiences appear to be diverse.

The other two barriers generally prevent the BSFC from becoming a primary grocery store for shoppers, subsequently decreasing the effectiveness of the Fresh Creds program. Affordability is obviously important for all shoppers, but SNAP users have varying experiences with affordability, especially students who use SNAP. On one hand, a common experience for SNAP users is the idea of "stretching" one's benefits month to month, as noted in participant interviews. Those who shop this way often employ multiple strategies to maximize their benefits' value. I noted this trend in interviews, which is reflected in the existing literature on SNAP users and their strategies to access food. However, much of the literature focuses on mothers or heads of households who are responsible for budgeting for a family (Gorman et al.). However, some strategies reflected in the literature include shopping at multiple sites, using coupons, food pantries, and buying in bulk. Shopping at multiple sites, using food pantries, and buying in bulk were also reflected in student interviews. I couldn't find much literature on student-specific strategies for shopping while using SNAP, but one paper describes the role of food pantries in

student food security (Chodur et al 2024). The UC Berkeley Basic Needs center offers produce grown by the Berkeley Student farms, which may further decrease the need for a produce-centered EBT incentive. It's also important to note that students often have limited time and resources for cooking, such as lacking cooking experience or an adequate kitchen. This limitation may also partially explain the popularity of grab & go foods at the BSFC and impact the applicability of a program like Fresh Creds. A focus group study found that existing SNAP-Ed educational material is not adapted for college student experiences (Gray et al. 2024). There is a clear need for more student-centered programming to improve student food security.

Some students who receive SNAP benefits may not consider affordability as much as others. Some students found their benefits to be more than enough, leading to them not prioritizing value while food shopping at all. These students may not buy in bulk, shop at multiple sites, or use other strategies previously listed. These diverse experiences make it difficult to pinpoint exactly how to improve the BSFC's offerings. For some, affordability seems to be a large barrier to shopping, while others seem not to consider it at all. The pricing present at the BSFC also has to do with the prioritization of local and sustainable brands, which often have higher prices. Given that respondents generally factor in the value of the BSFC's mission, it may not be immediately feasible to decrease pricing without compromising other organizational values. However, the BSFC's mission also prioritizes affordability, which may somewhat be at odds with the other part of its goals. To balance these priorities, the organization could turn to its consumers to determine which objectives should be most important.

Keeping reliable stock in the storefront also proves to be important to shoppers. The BSFC has a continuously rotating inventory, with new products brought in monthly. As a result, some consumers find the stock unreliable. Rotating stock also includes some staple foods like breads and dairy, which are not consistently offered. The lack of reliability of these items makes the BSFC unattractive as a primary grocery store. It's clear shoppers can't depend on the storefront to always have what one might want. The storefront also stocks produce seasonally, which further decreases the reliability of offerings. Again however, this practice is more environmentally sustainable due to decreased transportation costs, and more environmentally attractive by supporting more localized agriculture (Klimek et al. 2018).

It's clear that the BSFC is not used as a primary grocery store for most shoppers. In order to increase use of Fresh Creds, the organization should focus on increasing the attractiveness of the storefront as a grocery store through the standardization of inventory.

### **Perceptions of Fresh Creds**

The effectiveness of the Fresh Creds program is limited by the relevance of the storefront. However, by understanding the limitations of the storefront, we can then isolate how consumers use and perceive the Fresh Creds program itself. Although survey and interview participants generally had positive perceptions of the Fresh Creds program, program use remains low, composing less than 10% of EBT transactions. A response bias effect is apparent, in which the most active participants of EBT incentive programs have very positive testimonies and are eager to participate in surveys and interviews to share their experiences. These testimonies stand in stark contrast with low use of the program. As a result, survey/interview results are not indicative of the general population of SNAP users who may not use EBT incentive programs. This trend points to a larger phenomenon of a small, dedicated user base for incentive programs. This finding is in line with other studies of EBT incentive use, even in different settings (Gosliner et al 2022, Greenwald et al. 2022). Generally, incentive programs are underutilized, while those who do use them appreciate them. A majority of survey participants said they knew about Fresh Creds for more than 6 months, but a few even noted that they learned about the program through the survey. As a result, a greater emphasis on advertising the existing program may be an effective strategy to increase its use. Survey results also generally disagreed with the statement "Fresh Creds helps me afford more produce." Storefront purchase data also shows that produce is not a top category of products sold. These findings imply that the program isn't increasing produce purchasing behaviors. Instead, consumers likely supplement existing produce purchases with produce from the BSFC. This finding further supports observations of SNAP users maximizing the value of their benefits.

### **Limitations & further directions**

As a case study, findings from this study may not be widely generalizable across college campuses or in other grocery stores. In addition, within the existing study, several limitations apply. The largely observational design of the study makes it impossible to determine causal

relationships between the factors studied. The small sample size may not fully elucidate existing trends in the storefront. As previously mentioned, the sampling style for the surveys and interviews were self-selecting, leading to some evidence of response biases. There may also be some effect of social desirability bias because shoppers, and especially members of the BSFC who have a stake in the organization, may be hesitant to be critical of the organization. It's also important to note the limitations of a study involving individuals who use SNAP. There remains some shame and stigma associated with SNAP use for many, which may prevent them from feeling comfortable participating in a study largely focused on the experiences of SNAP participants. The Clover POS system doesn't track EBT card numbers in discount reporting features, which prevented an analysis of the prevalence of repeat customers. The system also doesn't track overlapping discounts, preventing an analysis of the prevalence of combining member and Fresh Creds discounts. Additionally, significant construction projects have blocked Bancroft way for several weeks, right by the storefront. Ongoing construction in the area was shown to have likely decreased sales in the storefront, having unforeseen effects on study results.

Future research on EBT incentive programs should make more explicit comparisons between EBT incentives across different settings. This comparison would make it easier to identify facilitators and barriers to incentive use by location. Implementing identical programs across different settings could isolate barriers, as other studies have explored the effects of modifying a program within one setting (Ratigan et al. 2017, Polacsek et al. 2023). Additionally, more research on college student-specific SNAP use is needed to better understand how this demographic uses SNAP benefits. It may be especially relevant to study the shopping habits of college students, including SNAP users, to better understand their shopping strategies. This research should specifically consider the circumstances of college students and how it affects their experiences with food, especially when it comes to a lack of culinary experience and limited time and resources to cook nutritious meals. It's also important to recognize college students' unique experiences with SNAP, which should be addressed to improve food access for student populations.

## **Implications**

To increase the use of incentive programs at the BSFC, the organization should first address existing limitations in the storefront to make it more welcoming as a primary grocery store.

Increased advertising of the existing incentive program may also increase use for those unfamiliar with the storefront and its offerings. A greater question to ask in the broader context of EBT incentives is whether they are truly needed to enhance equitable health outcomes for food insecure communities. The literature shows over and over again that EBT Incentives are largely underutilized despite variable settings and variable budgets to promote them. These incentive programs are supported by large portions of the CA state budget, which pays for the piloting, research, implementation, and staffing of these programs across the state. Ultimately, this money could be aggregated and redistributed directly to EBT users, instead of diluted through lines of administration and grants. Research also shows that SNAP users, especially heads of households who budget to feed their families, feel guilt about not feeding their families with enough ‘healthy’ foods, and would do so given the resources (Gosliner & Shah 2020). There is a broader conversation to be had about the prevalence of EBT incentives as a way to indirectly restrict consumer choice. Policymakers should recognize the autonomy of working families (and students) and trust that given the resources, they would be used in a way that would best benefit them.

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