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A Qualitative Evaluation of *Double Up Food Bucks* Farmers' Market Incentive Program Access

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Abstract

Objective: Explore factors affecting access to and use of *Double Up Food Bucks* (DUFB), a farmers' market program that doubles *Supplemental Nutrition Assistance Program* benefits for use toward the purchase of fruits and vegetables (FV).

Design: Focus groups.

Setting: Metro and nonmetro counties in Utah and western Upstate New York.

Participants: Nine groups composed of 62 low-income adults (3–9/group).

Phenomena of Interest: Satisfaction with, barriers to, and facilitators of program use; suggestions for improvement.

Analysis: Transcribed verbatim and coded thematically in NVivo 11 software according to template analysis.

Results: Program satisfaction was high and driven by FV affordability, perceived support of local farmers, positive market experiences, and high-quality FV. Primary barriers to using DUFB were lack of program information and inconvenient accessibility. Insufficient program communication was a consistent problem that elicited numerous suggestions regarding expansion of program marketing. Emergent topics included issues related to the token-based administration of DUFB and debate regarding stigma experienced during DUFB participation.

Conclusions and Implications: Results suggest that although DUFB elicits many points of satisfaction among users, program reach may be limited owing to insufficient program marketing. Even among satisfied users, discussion of barriers was extensive, indicating that program reach and impact may be bolstered by efforts to improve program accessibility.

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Keywords

Supplemental Nutrition Assistance Program; food assistance; fruit; vegetables; farmers' market incentives

INTRODUCTION

Farmers' market incentive programs are an increasingly common intervention to improve fruit and vegetable (FV) access and consumption among low-income households receiving *Supplemental Nutrition Assistance Program* (SNAP) benefits.¹ *Double Up Food Bucks* (DUFEB) is one of the most widely disseminated farmers' market incentive programs in the country with active sites across at least 24 states.² In the DUFEB program, SNAP participants receive a dollar to spend on locally grown (ie, in-state grown) FV for every dollar of SNAP benefits used at participating markets, thereby doubling their purchasing power for fresh FV. The DUFEB matching rules vary by site. For example, in Utah, participants are limited to a \$10 match per market visit, whereas a \$20 match per visit is allowed in western New York.

As farmers' market incentive programs have become more widely accessible, preliminary evidence of their impact on participants has been documented in both the lay^{3,4} and academic literature. There is evidence that participation in such programming may improve or be positively associated with FV purchasing,^{5,6} variety of FV purchases,⁵ total FV intake,⁵⁻¹² variety of FV consumed,⁷ overall dietary quality,^{6,10,11} and food security status.^{8,9} Moreover, 2 analyses concluded that subsidizing FVs for SNAP participants may be a relatively cost-effective approach to improving diet and reducing chronic disease risk in this population.^{13,14}

In response to the growing body of evidence in support of farmers' market incentive programming, the federal government has begun to dedicate more resources toward their robust evaluation and continued success. Since 2014, multiple federal programs have been funded for the specific support of such efforts, including the *Food Insecurity Nutrition Incentive Grant Program*¹⁵ and the *Farmers' Market Nutrition Program* and *Local Foods Promotion Program*.^{16,17} As federal support for incentive programming expands, program administrators and evaluators are under increased pressure to demonstrate the validity of hypothesized long-term program impacts on participants.

The long-term impact of DUFEB programming on the target population requires participants to be able to (and want to) access and use such programming reliably over time. Although intuitive, this is also represented in the literature. Bowling et al¹² found that the greatest dietary improvements were seen among participants who used the studied incentive program 6-8 times during the market season and Ratigan et al¹⁰ found that the odds of improved FV intake and dietary quality increased by 2% and 10%, respectively, per month of participation. Yet, among the sample of incentive program users studied by Cohen et al,¹⁸ only one third had used the program more than once in a 2-year period.¹⁸ These findings raise important questions about the factors that may influence program use and retention among eligible low-income individuals. Benefits demonstrated by those studies will have little public health impact without more widespread programmatic uptake. Yet, most studies

on market-based incentive programs used quantitative methods and were focused on outcome. More qualitative inquiries into factors that facilitate or limit program reach are needed to support evidence-based program implementation and expansion. The purpose of this study was to explore low-income adult consumers' perceptions of and experiences with accessing and using the DUFB farmers' market incentive program in Utah and New York employing an inductive, qualitative approach.

METHODS

Between 2014 and 2017, the researchers conducted independent qualitative evaluations related to DUFB programming in New York and Utah. Because of the overlapping nature of these evaluations with regard to questions of program satisfaction, barriers to and facilitators of program use, and suggestions for program improvement, a decision was made after data collection to analyze a portion of the resulting data together (Table). These data are the focus of this article. Combining data from these 2 independent studies allowed for program reach and use to be studied across a broader multistate sample.

New York Data Collection

In fall, 2014, an evaluation of DUFB was conducted in partnership with Field and Fork Network¹⁹ at 7 farmers' markets across 2 counties (one metro and the other was nonmetro) in western Upstate New York. Between September and November, a study team member approached DUFB participants regarding the opportunity to participate in a brief survey (n = 147; results not presented here). Participants were approached only after they had successfully completed an Electronic Benefits Transfer (EBT) and DUFB transaction, to ensure that all were current participants of DUFB. To participate, DUFB users had to be aged 18 years and English-speaking. An end-of-survey question asked whether the respondent would be interested in participating in a follow-up focus group. Participants interested in the focus group opportunity (n = 73) were contacted regarding potential inclusion.

The focus groups (n = 4) were held in mid-November at a community center or other public venue with free parking and were facilitated by a trained researcher (J.A.G.) and audio-recorded. All sessions lasted 60–90 minutes and were transcribed verbatim. All participants (n = 33) provided written, informed consent and completed a brief demographic questionnaire to be used for sample description. Participants were compensated \$50 in cash for their time and travel. The data collection protocol was approved by the Institutional Review Board at Cornell University (No. 1408004893).

Utah Data Collection

In 2016–2017, an evaluation of DUFB was conducted in partnership with Utah *Supplemental Nutrition Assistance Program–Education* (SNAP-Ed) across 5 Utah counties (4 metro and 1 nonmetro). Between November and March, interested participants (n = 105) completed an anonymous, 5-minute online survey to determine eligibility to participate in the focus groups. The survey was made available to participants after they had attended a Utah SNAP-Ed class. To participate, individuals had to be aged 18 years, English-speaking,

and using 1 form of food assistance (eg, SNAP, *Special Supplemental Nutrition Program for Women, Infants, and Children*, or local food relief). At the end of the survey, eligible respondents were asked to provide contact information for follow-up regarding focus group scheduling.

The focus groups (n = 5) were held in central locations near bus stations and with free parking. A trained qualitative researcher (M.R.S.) facilitated the focus groups with a note taker (C.C.). Each focus group lasted around 60 minutes and was audio-recorded and transcribed verbatim. All participants provided written, informed consent and were provided a \$25 gift card to a nearby supermarket as compensation for time and travel expenses. The data collection protocol was approved by the Institutional Review Board at Utah State University (No. 7595). Utah participants did not provide the same demographic and health data as did those in New York.

Data Analysis

All focus group transcriptions (n = 9 groups; 62 participants) were uploaded into NVivo qualitative analysis software (version 11, QSR International Pty Ltd, Doncaster, Victoria, Australia, 2015) for analysis. An initial coding framework was drafted based on the main research question; emergent codes were added through iterative rounds of double coding and framework revision by J.A.G. and C.C. according to the tenants of template analysis.²⁰ Template analysis is a version of thematic content analysis that allows for the use of both *a priori* and emergent codes in generating data themes. This structured approach allowed a focused analysis of data from focus groups for which the semi-structured guides differed across states (Table). The process of iterative coding and codebook revision was repeated until no new codes emerged. The final coding framework was approved by all authors and was used to code all transcripts. Interrater reliability was excellent; observed agreement was >98%, kappa was 0.78, and prevalence- and bias-adjusted kappa was 0.98.^{21–23} Demographic data were analyzed using descriptive statistics.

RESULTS

Sample Characteristics

New York focus group participants (n = 33) were primarily female (79%), white (85%) or black (9%), and non-Hispanic (94%), mean age 45.8 ± 14.9 years. Participants had a range of educational backgrounds: 24% were high school graduates, 36% had completed some college, and 30% were college graduates. Self-reported weights and heights indicated a mean body mass index of 31.4 ± 9.3 kg/m² (obese), and self-reported health status revealed that 100% of participants had at least 1 chronic health condition; 39% reported 2 health conditions. Utah focus group participants (n = 29) were primarily female (90%).

Program Satisfaction

Four key points of program satisfaction emerged consistently across focus groups. In order of consistency and frequency across groups, they were: affordability of FV, opportunity to support farmers, positivity of the market experience, and high quality of FV. Each is addressed in more detail subsequently.

In both states, the most commonly reported benefit was improved affordability of fresh produce. For example, a user stated,

It's expensive to eat healthy. And that's why I like how you get double ... because you can get healthier foods for cheaper.

(Utah)

Improved FV affordability seemed to have positive implications for FV consumption, experimentation, and preservation. A participant explained,

I love to cook, because my wife can't cook, and like I said, I never ate so many fruits and vegetables. I never did. They were too expensive.

(New York)

Others discussed their tendency "to buy things that I've never tried before when I'm at the farmers' market" (Utah). Others were proud to share their preservation efforts: "I ended up filling a 20-ft cubic freezer of fruits and vegetables, and I did about 50 qt of different various things" (New York).

The second most common point of satisfaction among participants was that the program allowed them to support local farmers, and thus their local community, directly. Participants discussed *boosting* (Utah) the local economy through the use of SNAP benefits at local farmers' markets. One participant articulated the perceived mutual benefit of such programming:

I'd rather spend more money on things I know that are coming from my community and, like, the money gets back into the community, so it kind of helps either way you look at it—for the community and for [our]selves, so, I'd rather buy from the farmers' market than going to the store and buying there.

(New York)

A related point of satisfaction among participants was their experience at the markets and with participating vendors. The overarching sentiment was a multifaceted sense of positivity. Some discussed amazing vendors (Utah) and how "you get to talk to the farmers more, [who] explain the different herbs they have and what they can be used for" (New York). Others talked favorably about "coming out and listening to the music" (Utah) and "tak[ing] the dog to socialize [and] get[ting] to meet other people" (New York). One participant compared the experience at the market with that at the grocery store:

It's a difference of life, okay. When we go to the farmers' market, you come home energized with raspberries to stick in your mouth. You go to [grocery store] and you're overwhelmed. ... My head's going, 'I can't afford this, and I have to put that back' ... it feels dead in there. The life of whatever is in there is so old, it's kind of like, 'I've got to buy this for my family and make it work.' It just takes all the ... [Another participant finished the sentence]: *the vitality.*

(New York)

Participants were also satisfied with the quality of the produce at the farmers' markets and discussed it consistently and frequently across focus groups. Overall, they found market produce to be fresh and superior to store produce along multiple dimensions:

I don't know if it's because it's more organic or what it is, but it seems like the farmer market vegetables won't [spoil] as fast as the vegetables that you get in some of the grocery stores.

(Utah)

It's really hard to buy fruits and vegetables. Because the prices go way up in the supermarkets. And they just don't taste anywhere near like the farmers' market.

(New York)

In New York but not Utah, some DUFEB participants spoke about the program's benefits for managing chronic health conditions. A participant with multiple conditions shared,

To me, the way I eat is the best way I can control [my health problems], and so I try eat fruits and vegetables, and that's just it. And being able to afford them better this year was really helpful. I didn't have to worry about where I was going to get them. It meant a lot to me.

A man with diabetes explained,

When [the doctor] checked my blood, the glucose was lower than it ever was. The doctor couldn't figure that out ... so to me, that was good, you know. It was a good deal for me.

Barriers to DUFEB Use

Two barriers to using DUFEB emerged consistently across focus groups: being ill-informed and issues of inconvenience. Participants felt ill-informed because of a perceived lack of program and market-level marketing and unclear information about how to use the program; this was one of the most highly discussed subjects across all topics. One participant summarized her frustration (which reflected that of many others) by saying,

I didn't even know that there was a farmers' market [until] late last year, and it was like right before it kind of shut down for the season, and it was, like, well, that was a bummer because I could have gone this whole time and had no idea, because there wasn't enough advertising going on.

(New York)

Various inconveniences also kept people from using DUFEB as much as they would have liked. For some people, parking at or near the market was difficult and potentially expensive. For others, a lack of transportation was an issue. More commonly, though, participants discussed inconveniences related to the location or timing of the market:

I don't come all the way down here, because I'm in [town], and so for me, it's just not worth it to drive all the way down on a Saturday morning. It's pretty far down here and it's only on Saturday mornings, and Saturday mornings seem to be all the soccer games and all the ... you know, anybody who is having a meeting or

something like that, always seems to be on Saturday morning, and Saturday at 3 o'clock rolls around and I'm like, oh I forgot to go to the farmers' market.

(Utah)

Facilitators to DUFB Use

During analysis, a distinction was made between points of participant satisfaction and factors that had a direct role in encouraging or supporting participants' access to or use of DUFB. Focus group participants did not discuss such factors with much frequency, but 2 did emerge consistently across most New York-based groups: convenience and vendor availability. The primary convenience was the ease of using the program. One participant exclaimed, "It's a big help. It's a huge thing. I did not have to fill out paperwork just to do it; [that] is awesome." Others commended market locations accessible by those without vehicles (eg, in downtown areas) and the placement of FV vendors at the front of the market for convenient access. Vendor availability also influenced when and where they used DUFB. Some participants attempted to maximize access to vendors by visiting on days and at markets with the most vendors present.

Program Dissatisfaction and Suggestions

A strong and consistent point of dissatisfaction and the focus of multiple suggestions was insufficient program communication. Participants relied on word of mouth for program information and could not find program details even after becoming aware of its existence:

I had trouble finding out about it. I went online to see, because we have a family of 4, so getting to the farmers' market without being sure ... So, for us, we heard of it word of mouth. I couldn't find more information when I looked for it.

(New York)

Others happened upon the opportunity once already at the market: "I found the program by accident. I, it, I didn't see any advertising or anything to tell me about it" (New York). Those who knew about it still struggled at times to understand how it worked or to discern which vendors accepted DUFB:

Because some stands would be nice enough and have the label Double Up welcome here. But a lot of them didn't, so that would've helped to know.

(Utah)

Accordingly, a popular suggestion was to improve and expand program marketing at participating markets, and more broadly. For example, a participant suggested,

Some markets, they don't put a sign on their SNAP desk. ... Some of them were very hard to find. So that might just be something, to make bigger signs or put [market manager tents] right by the entrance or something.

(New York)

Ideas for advertising DUFB more broadly included sharing information via Facebook and other social media, sending information pamphlets with SNAP recertification paperwork, and leveraging farmers' market Web sites and posting boards available at local businesses

and social service sites. There were a few specific calls to advertise better that EBT and DUFB could be used to purchase plants that participants could use to grow food.

In New York, there was consistent interest across all focus groups in adding educational components to DUFB programming. As a young woman explained,

I've tried really hard to learn because I like homemade food, but I don't know how to cook and no one's ever around to teach me how to cook, so if they had some sort of educational programs or something where we could take a class to learn anything ... I mean, I've been depending on Google.

Specific class suggestions included a lesson on how to use herbs to flavor food (“[Be]cause the food could taste so much better if we knew!”) and guidance on how to preserve FV.

Token-Based System

A major issue discussed extensively across all New York focus groups, but not in Utah, was DUFB's currency system. When participants swipe the EBT card, the value of the transaction is provided via wooden market-specific tokens from the applicable state agency managing market EBT access. Then, the participants receive the same value in plastic silver DUFB tokens. This system is used in Utah and other states as well. Of foremost concern was the consistent shortage of state-provided market EBT tokens at DUFB-participating markets. This halted access to DUFB until market staff could either retrieve spent tokens in real time from market vendors or wait (often multiple weeks) for a shipment of additional tokens from the state agency. Some markets attempted to circumvent this issue by creating paper-based currency (coupons) to use in lieu of the tokens. This had the unintended consequence of fostering further confusion about the program:

They changed the currency several times, like, how the appearance of the tokens and the little coupons and stuff. So, it is kind of, like, every time I had to double-check myself and say, 'Well, this is only good for fruits and vegetables, that one I can buy any food product.' Maybe, you know, come up with one and stick with it and, you know, make it kind of obvious.

Stigma

One probing question asked in the New York focus groups but not the Utah ones was whether DUFB participants felt stigmatized during the program experience. Even so, it emerged in at least 1 Utah focus group. Most participants reported no stigma or embarrassment. For at least 1 person, though, this lack of embarrassment hinged on the program's private funding (at the time of the focus groups):

When you tell people about the food program or this, they think it's government supplemented, it's like, "Oh, there go my tax dollars." Oh that's more money, that's my tax dollars, and it's, like, this isn't your tax dollars. People don't understand that, and it's a shame, because I think sometimes people look at you different because of it. But they don't understand that it's not funded by the government.

(New York)

A few participants admitted to feeling embarrassment related to the program, but that the market was a less judgmental venue than the grocery store:

I do [feel judged] sometimes just in general, but when you compare it to going to the supermarket. I hate going the supermarket using my food stamps. I think that you feel ... [Another participant finished:] Demoralized. [The original speaker agreed:] Yeah. And for some reason, at the farmers' market I feel like it's more of an accepted kind of thing.

(New York)

Among those who felt embarrassed by the program, there were some for whom this was because of the obvious distinction it created between EBT and DUFEB users and nonusers:

like, a lot of my, um ... peers older and younger are embarrassed that they have these coins. And there's, like, that judgment back from the 70s or 80s ... they actually had paper food stamps ... so when they did the cards, that was awesome, because you're like, oh yeah ... no one knows that I'm poor and need to feed my off-spring, and so at the market, those coins are like really bright green wood tokens.

(Utah)

DISCUSSION

Across groups, satisfaction with the DUFEB program was strong and multifaceted. The most common point of program satisfaction was FV affordability. Strong satisfaction among incentive program participants in this study complements the favorable views of such programming by program administrators, market managers, and farmers as reported by Payne et al.²⁴

During discussion about barriers to and facilitators of accessing and using the program, barriers were discussed with more frequency and consistency across groups than were facilitators. Insufficient program communication, in particular, was a major topic of discussion that elicited numerous suggestions regarding expansion of program marketing at markets and across the community. This finding is consistent with a qualitative study by Savoie Roskos et al.,²⁵ which found that most SNAP participants did not know they could use their benefits at local farmers' markets. It is also consistent with a survey-based study by Freedman et al.^{26,27} that found that a majority of respondents (all of whom were enrolled in SNAP) had no awareness of available incentive programming or nearby farmers' markets. Lack of awareness was the primary barrier to shopping at farm-to-consumer outlets (including farmers' markets) among a sample of participants in the *Special Supplemental Nutrition Program for Women, Infants, and Children*.²⁸ These findings are of key importance to program administrators; prioritizing and using programmatic funds to support marketing initiatives, especially if a program is new to the area, may facilitate its reach and, in turn, its long-term impact.

Farmers' market incentive programs can have a positive impact on attendance at participating markets, market spending, and vendor revenue.^{6,7,29–32} Thus, the marketing of

market-based incentive programs may also promote improved financial viability of participating markets and farmers, especially those who sell primarily FV; who rely on markets, especially those that are small or medium; and who perceive the incentive programs to be satisfactorily implemented.³³ Program administrators might consider leveraging the reported points of program satisfaction in their marketing. For example, marketing materials could emphasize the value, quality, and novelty of FV varieties available at the market; the opportunity for participants to support local farmers; the convivial or social nature of the market atmosphere; and the health-promoting nature of the market crops.

Unsurprisingly, convenience (or lack thereof) emerged as a barrier or facilitator, depending on the market location, schedule, and other logistical factors. This is in line with 2 survey-based evaluations of SNAP participants that identified inconvenience, including a lack of transportation and out of the way locations, as the primary barrier to shopping at farmers' markets^{34,35} and a focus group study of SNAP participants that identified a lack of transportation and limited market locations and hours as 2 key barriers to using DUF^B.³⁶ It also aligns with a systematic review that found a lack of transportation to be one of various barriers that limited farmers' market use among low-income consumers.³⁷ Managers looking to expand DUF^B use and redemption at their sites may need to engage in community needs assessments to understand how they could maximize market accessibility.

Unexpected findings included the role of inconsistent token administration in exacerbating program users' confusion and the relatively minimal feelings of program-related stigma experienced by DUF^B users in the current sample. Although stigma was identified as a factor to consider in designing incentive programs for SNAP users,³⁸ to the authors' knowledge, only 1 other study collected data from SNAP users and related stakeholders regarding stigma experienced at the farmers' market. Authors of that study found that some stakeholders were concerned about stigma related to the token-based administration of the program (and the distinction it caused between users and nonusers), but it was not an important barrier cited by participants themselves.³⁵ Among this sample, the experience of stigma was minimal and contingent on the program's token-based administration of the program as well as the program's funding structure and the positivity of the farmers' market experience. Because of the role that these factors may have in program use, they are worth exploring further in future studies and for program administrators seeking to maximize program reach and impact to consider.

Despite increased access to DUF^B and other similar programs across the US and ongoing support for them by the US federal government, relatively little is known about factors affecting participant access to and use of these programs. Such knowledge is essential to maximizing program reach and impact. This study helps to fill this important gap by identifying factors that participants liked or that facilitated access to or use of the program; that were disliked or impeded access to or use of the program; and ideas for program improvements. The results are strengthened by the inclusion of participants from counties of varied population density across 2 geographically dispersed states, and by the resulting increase in the total sample size. Study design between Utah and New York sites differed slightly and a comparison of the New York and Utah samples was not possible owing to differences in the degree of demographic data collection. Both states relied on a convenience

sample of DUFB-eligible participants, which may not be representative of all DUFB-eligible individuals or generalizable to the administration of other farmers' market incentive programs. These limitations did not appear to affect the consistency with which programmatic factors were reported across sites. The themes and findings presented here were those that emerged consistently across states and sites unless otherwise noted.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Farmers' market incentive programming is an increasingly popular way to address current diet and health disparities in the US. Demonstrating program impact through rigorous evaluation is vital considering the political debates regarding farm bill programming and ongoing discussions regarding potential SNAP reform. Results of this qualitative analysis suggest that although DUFB elicits many points of satisfaction among users, the reach and long-term impact of DUFB program may be hindered by insufficient program marketing. Even among satisfied users, discussion of barriers was more extensive than that of facilitators, which indicates a need to prioritize the development and funding of strategies to improve program awareness and understanding to facilitate program reach, satisfaction, effectiveness, and sustainability. The current evidence supports further exploration of the studied phenomena among a larger and more representative sample of farmers' market incentive program users.

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Table.

Comparison of Double Up Food Buck Focus Groups Questions in New York and Utah

New York Sites	Utah Sites
What do you like about the DUFB program?	What do you like about the DUFB program?
Are there things you do not like about the DUFB program? If so, what?	What do you dislike about the DUFB program?
Do you have any suggestions for how we could improve DUFB?	What suggestions do you have for us to improve the DUFB program?

DUFB indicates Double Up Food Bucks.