

## Uses of Behavioral Economics Nudges within Healthy Retail Interventions in the SNAP-Ed Program: Research Opportunities

### The Duke-UNC USDA Center for Behavioral Economics and Healthy Food Choice Research (BECR)

**Purpose:** BECR facilitates new and innovative research on the application of behavioral economics theory to healthy food choice behaviors that would contribute to enhancing the nutrition, food security, and health of American consumers. BECR is particularly interested in promoting healthy and cost-effective food choices for participants in the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

**Vision:** To use behavioral economics principles and strategies to promote healthy, economical food choices among WIC and SNAP recipients and the general public through research, capacity building, and dissemination.

**Funding:** The BECR Center is funded by grant 59-5000-4-0062 from the U.S. Department of Agriculture.

**Disclaimer:** The views expressed in this publication are those of the authors and cannot be attributed to the U.S. Department of Agriculture, its Economic Research Service, or its Food and Nutrition Service.

June 2016

Daniella Uslan, MPH<sup>a,b</sup>  
Jessica Soldavini, MPH<sup>a</sup>  
Molly De Marco, PhD, MPH<sup>a,b,d</sup>  
Terry Hartman, MPH, MS, CCRC<sup>c,d</sup>  
Alice Ammerman, DrPH, RD<sup>a,b,d</sup>

<sup>a</sup> Department of Nutrition, Gillings School of Global Public Health, University of North Carolina at Chapel Hill

<sup>b</sup> Center for Health Promotion and Disease Prevention

<sup>c</sup> Sanford School of Public Policy, Duke University

<sup>d</sup> Center for Behavioral Economics and Healthy Food Choice Research

In 2015, the Supplemental Nutrition Assistance Program (SNAP) provided more than 45 million people with assistance in purchasing foods at a cost of almost \$74 billion.<sup>1</sup> SNAP benefits can be redeemed in SNAP-authorized retailers including supermarkets, supercenters, grocery stores, convenience stores, corner stores, and farmers' markets. However, most SNAP benefits (~90%) are redeemed in supermarkets, grocery stores, or supercenters.<sup>2</sup> With the exception of hot, prepared foods, SNAP benefits can be used for most grocery items.

The Nutrition Education Program for SNAP recipients (SNAP-Ed) is funded by the USDA at a total of more than

\$400 million nationally and aims to promote healthy, economical food choices.<sup>3</sup> In 2010, Congressional legislation expanded the activities allowable under SNAP-Ed to include policy, systems, and environmental change activities. It also required that SNAP-Ed activities be evidence-based. Healthy retail interventions to encourage healthy food choices are among the newly allowable activities. Given the importance of food purchasing decisions to achieving SNAP-Ed objectives, retail-based strategies seem highly promising, indicating the need for research to identify evidence-based interventions.

### Healthy Retail Activities That Can Be Supported Using SNAP-Ed Funding

SNAP-Ed is implemented by states, who submit plans that are then reviewed and approved by the USDA for appropriate use of federal funds. [The SNAP-Ed Guidance](#) is developed by the USDA and updated yearly as a means to assist States and SNAP-Ed implementing agencies to craft a plan consistent with approved uses of SNAP-Ed funds that uses the most current nutrition and obesity prevention approaches.<sup>4</sup> The language included in this brief reflects the Fiscal Year 2017 SNAP-Ed Guidance.

The Guidance provides examples of *Policy, Systems, and Environmental Approaches* that include retail interventions.<sup>4</sup> "Creat[ing] healthy corner stores or food retail policies and organizational practices" is listed as an approved approach and defined elsewhere in the guidance as "consultation and technical assistance to the retailer on expanding its fruit and vegetable offerings and behavioral techniques to position produce displays to reach the target audience" (pg. 31).<sup>4</sup> This approach is included in the SNAP-Ed Guidance under two of the

**Acknowledgements:** The authors graciously thank Dr. Joanne Guthrie and the staff at the USDA's Food and Nutrition Services for their review and comments.

three Nutrition Education and Obesity Prevention Approaches—Approach 2 – *Comprehensive, multi-level interventions at multiple complementary organization and institutional levels* and Approach 3 – *Community and public health approaches to improve nutrition and obesity prevention*. Under these two approaches SNAP-Ed implementers can provide:

*consultation, technical assistance, and training to SNAP-authorized retailers in supermarkets, grocery stores, a local corner or country store to provide evidence-based, multi-component interventions. SNAP-Ed providers may work with key partners on strategic planning and provide assistance with marketing, merchandising, recipes, customer newsletters, and technical advice on product placement. The retailer could provide produce, healthy nutrition items, and point of sales space for a healthy checkout lane [as well as permission to] provide training to retailers on healthy foods to stock and strategies to encourage people to purchase and use such foods (pgs. 25-26).<sup>4</sup>*

The SNAP-Ed Guidance also describes what retail intervention expenses are allowed to be covered with SNAP-Ed funds (see Table 1 for a list of allowable and unallowable expenses).

### Stores Where SNAP-Ed Activities Can Take Place

According to the Guidance Section A. *Identifying and Understanding the Target Audience Definition of Target Audience* (pg. 45), healthy retail activities may be implemented in retail locations that serve low-income populations.<sup>4</sup> Retail stores that qualify are those that have an average of \$50,000 or more in monthly SNAP sales or stores located in census tracts where at least 50 percent of persons have gross incomes that are equal to or less than 185 percent of the poverty threshold. The SNAP-Ed Guidance also permits alternate methods for targeting retail stores since many SNAP shoppers do not shop at stores closest to where they live, especially in rural areas. The Guidance suggests using tools such as the [USDA's ERS Food Environment Atlas](#),<sup>5</sup> which maps SNAP authorized retailers as well as Socioeconomic and Health characteristics including obesity rates.

healthy retail activities may be implemented in retail locations that serve low-income populations.<sup>4</sup> Retail stores that qualify are those that have an average of \$50,000 or more in monthly SNAP sales or stores located in census tracts where at least 50 percent of persons have gross incomes that are equal to or less than 185 percent of the poverty threshold. The SNAP-Ed Guidance also permits alternate methods for targeting retail stores since many SNAP shoppers do not shop at stores closest to where they live, especially in rural areas. The Guidance suggests using tools such as the [USDA's ERS Food Environment Atlas](#),<sup>5</sup> which maps SNAP authorized retailers as well as Socioeconomic and Health characteristics including obesity rates.

### Types of Interventions

SNAP-Ed providers may provide consultation, training, and technical assistance to eligible retailers on a variety of areas, including:

- Increasing the availability of healthy foods sold, such as fruits and vegetables
- Nutrition education and marketing materials
- Product placement
- Point-of-purchase strategies, such as creating healthy checkout lanes
- Policy, systems, and environmental change interventions within the retail environment can be complemented by nutrition education strategies such as:
- Distribution of nutrition education materials
- Taste tests or cooking demonstrations
- Grocery store tours

**Table 1. Examples of SNAP-Ed Allowable and Unallowable Healthy Retail Expenses**

Allowable	Unallowable
✓ Nutrition education/promotional materials that address SNAP-Ed topics	✗ Materials that promote a brand name or store
✓ Food and supplies for taste testing and cooking demonstrations	✗ Coupons
✓ Training for SNAP-Ed delivery staff related to implementing healthy retail interventions	✗ Nutrition education materials that are not consistent with MyPlate and the current <i>Dietary Guidelines for Americans</i>
✓ Consultation, training, and technical assistance to food retailers and partner organizations	✗ Capital improvements to retail stores
✓ Conducting environmental assessments of the retail food environment	✗ Equipment such as refrigeration units or shelving ( <i>although technical assistance can be provided to identify other sources of funding</i> )
✓ Point-of-purchase signage and other behavioral cues to action that promote healthy food choices	✗ Financial incentives to retailers to support changes to the retail food environment
✓ Preparing reports and sharing information on the expected benefits of healthy retail interventions	✗ License or permit fees for food retailers
✓ Resource kits with strategies for adopting, implementing, maintaining, and evaluating healthy retail interventions	✗ Salaries for store staff

PHONE

(919) 613-5907

FAX

(919) 613-0539

WEB

www.BECR.org

## Evidence-Based Interventions

Evidence-based interventions within SNAP-Ed are interventions that have been evaluated and found to be effective at changing knowledge, attitudes, and behaviors around diet and physical activity. [The SNAP-Ed Toolkit](#) may be used as a guide to identify existing evidence-based interventions appropriate for use in SNAP-Ed program delivery.<sup>6</sup> Specific examples of retail-oriented interventions are given in Table 2.

**Table 2. Examples of Evidence Based Retail Interventions**

Intervention	Description	Source/Link(s)
Stock Healthy, Shop Healthy	Multi-component, community-based program that works with small food retailers to improve access to healthy, affordable foods.	University of Missouri Extension <a href="http://extension.missouri.edu/stockhealthy">http://extension.missouri.edu/stockhealthy</a>
Baltimore Healthy Stores	Program that works with small stores through strategies that use the store's existing facilities such as working with store owners to stock promoted foods, point-of-purchase marketing strategies, and nutrition education.	John Hopkins University <a href="http://healthystores.org/projects/archive/baltimore-more-healthy-stores/">http://healthystores.org/projects/archive/baltimore-more-healthy-stores/</a> <a href="http://centertrt.org/?p=intervention&amp;id=1093">http://centertrt.org/?p=intervention&amp;id=1093</a>
Healthy Retail Recognition Pilot/Retail Program	Provides training and support to retailers on purchasing, storing, displaying, and promoting fruits and vegetables and other healthy foods. Nutrition education activities and merchandising materials are also included.	California Department of Public Health <a href="http://www.cdph.ca.gov/programs/cpns/Pages/RetailProgram.aspx">http://www.cdph.ca.gov/programs/cpns/Pages/RetailProgram.aspx</a>
Minneapolis Healthy Corner Store Program	Program that works with store owners to support changes to increase access, availability, attractiveness, and awareness of healthy foods in corner stores, such as produce procurement, store enhancements and community engagement events in store.	Minneapolis Health Department <a href="http://centertrt.org/?p=intervention&amp;id=1193">http://centertrt.org/?p=intervention&amp;id=1193</a> <a href="http://centertrt.org/?p=intervention&amp;id=1193">http://centertrt.org/?p=intervention&amp;id=1193</a>

## Behavioral Economics Strategies for Use in Retail Settings

We all know that people and organizations do not always make the seemingly rational decision with the information and choices they have available to them. Behavioral Economics aims to explain how and why people make the decisions they do. For example, cognitive biases can lead to overvaluing short-term benefits such as the taste or convenience of foods versus long-run benefits such as health. Continued demands on self-control can deplete mental resources, as can the need to make complex time-money tradeoffs. These problems may be particularly acute for low-income individuals who have little margin for error in their economic decisions.<sup>7</sup> Behavioral economics uses a wide range of tools from the behavioral sciences, from economics to psychology and marketing to understand decision-making.<sup>8-12</sup>

Behavioral economists have shown that small changes in the environment can strongly affect the outcome of the decision.<sup>7-10</sup> Behavioral Economics concepts and strategies have potential for use in retail settings such as traditional grocery stores, corner stores, and convenience stores to promote healthy food choices. Some examples that could be deployed and evaluated for effectiveness include:

- **Choice Architecture/Product Placement:** Research shows that individuals are affected by how individual choices are presented. Healthier food choices could be arranged for greater visibility such as at eye level, at the front of the store, on end caps, or near the cash registers.
- **Pre-Commitment:** Once individuals commit to an end, they are less likely to change their course of action.<sup>13</sup> Therefore, participants could be asked to pre-commit a certain amount of their food dollars to healthier food by purchasing items upfront such as through a group buying club or pre-purchased healthy food box.
- **Default Options:** The default option is the predetermined course of action that will occur unless otherwise changed by the decision maker. Individuals can make choices, but if none is made the

PHONE

FAX

WEB

(919) 613-5907

(919) 613-0539

www.BECR.org

default option stands<sup>13</sup> Within a retail setting, SNAP-Ed implementers can provide technical assistance to retailers around default options. For example, retailers, when conducting ‘free with purchase’ promotions, could be advised to set the default option to a healthier food such a fruit, vegetables, or water.

- **Mental Accounting:** The tendency of individuals to compartmentalize their spending on categories of purchases like food, clothing, and entertainment. Mental accounting can be used to assist SNAP participants to set aside a certain amount of their SNAP benefits for healthier foods.<sup>14-15</sup>
- **Social Norms:** Social norms are behaviors that are considered normative in a population.<sup>16</sup> Social norming messages can be used in retail settings to indicate to shoppers that other customers regularly purchase healthier food options or using social comparison display what percent of an average shopper’s grocery basket is healthier food options.<sup>17</sup>

The above strategies are areas for future research needed to test the effectiveness of retail-oriented interventions derived from these principles. Research is also needed to test whether these strategies are effective in different settings and parts of the United States. Given all the constraints that low-income households face, SNAP participants may benefit greatly from “nudges” aimed at promoting healthy, economical choices.<sup>18-19</sup> Therefore, strategies showing effectiveness could be implemented within SNAP-Ed, a nationwide program, with the potential to positively affect low-income consumers throughout the United States. To this end, our Center conducts and supports research that apply behavioral economics to healthy, economical food choices for low-income audiences, especially SNAP recipients.

## References

- <sup>1</sup> USDA Food and Nutrition Service. 2016. Supplemental Nutrition Assistance Program Participation and Costs Access at <http://www.fns.usda.gov/sites/default/files/pd/SNAPsummary.pdf>.
- <sup>2</sup> Ver Ploeg M, Mancino L, Todd JE, Clay DM, Scharadin B. 2015. *Where Do Americans Usually Shop for Food and How Do They Travel to Get There? Initial Findings from the National Household Food Acquisition and Purchase Survey*. U.S. Department of Agriculture, Economic Research Service. Access at <http://www.ers.usda.gov/media/1807325/eib138.pdf>.
- <sup>3</sup> USDA Food and Nutrition Service. 2016. State SNAP-Ed Allocations. Access at <https://snaped.fns.usda.gov/sites/default/files/uploads/StateSNAP-EdAllocationsFebruary2016.pdf>.
- <sup>4</sup> USDA Food and Nutrition Service. 2016. Supplemental Nutrition Assistance Program Education Plan Guidance FY 2017: Nutrition Education & Obesity Prevention Grant Program. Access at <https://snaped.fns.usda.gov/sites/default/files/uploads/Final FY 2017 SNAP-Ed Plan Guidance 04-04-2016.pdf>.
- <sup>5</sup> USDA Economic Research Service. 2015. Food Environment Atlas. Access at <http://www.ers.usda.gov/data-products/food-environment-atlas.aspx>.
- <sup>6</sup> USDA, ASNNA, Center TRT, NCCOR. 2016. SNAP-ED Strategies & Interventions: An Obesity Prevention Toolkit for States. Access at <https://snaped.fns.usda.gov/sites/default/files/uploads/NCCORSNAP-EdToolkit2016UpdateApril2016FINAL.pdf>.
- <sup>7</sup> Mullainathan S, Shafir E. 2013. *Scarcity: Why Having Too Little Means So Much*. New York: Times Books.
- <sup>8</sup> Johnson EJ, Shu SB, Dellaert BG, Fox C, Goldstein DG, Häubl G, Larrick RP, Payne JW, Peters E, Schkade D, Wansink B, Weber EU. 2012. Beyond nudges: Tools of a choice architecture. *Marketing Letters*, 23(2), 487-504.
- <sup>9</sup> DellaVigna S. 2009. Psychology and Economics: Evidence from the Field. *Journal of Economic Literature* 47: 315-72.
- <sup>10</sup> Kahneman D, Knetsch J, Thaler R. 1991. The endowment effect, loss aversion, and the status quo bias. *Journal of Economic Perspectives*, 5:193-206.
- <sup>11</sup> Thaler R. 1980. Toward a positive theory of consumer choice. *Journal of Economic Behavior and Organization*, 1:39-60.
- <sup>12</sup> Thaler R, Sunstein, CR. 2008. *Nudge: improving decisions about health, wealth, and happiness*. New Haven, CT: Yale University Press.
- <sup>13</sup> Thaler RH, Benartzi, S. 2004. Save More Tomorrow: Using behavioral economics to increase employee saving. *Journal of Political Economy*, 112:S164-S187.
- <sup>14</sup> Morewedge CK, Holtzman L, Epley N. 2007. Unfixed Resources: Perceived Costs, Consumption, and the Accessible Account Effect. *Journal of Consumer Research*, 34(4):459–467.
- <sup>15</sup> Prelec D, Simester D. 2001. Always Leave Home Without It: A Further Investigation of the Credit-Card Effect on Willingness to Pay. *Marketing Letters*, 12(1):5–12.
- <sup>16</sup> Allcott H. 2011. Social norms and energy conservation. *Journal of Public Economics*, 95(5):1982-2095.
- <sup>17</sup> Payne CR, Niculescu M, Just DR, Kelly MP. 2015. Shopper marketing nutrition interventions: Social norms on grocery carts increase produce spending without increasing shopper budgets. *Prev Med Rep*, 2:287-291.
- <sup>18</sup> Mancino L, Guthrie J. 2014. *SNAP Households Must Balance Multiple Priorities to Achieve a Healthy Diet*. USDA Economic Research Service.
- <sup>19</sup> Edin K, Boyd M, Mabli J, et al. 2013. *SNAP Food Security In-Depth Interview Study*. U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis.

PHONE

(919) 613-5907

FAX

(919) 613-0539

WEB

www.BECR.org