

Packaged Food and Beverage Purchases in the Supplemental Nutrition Assistance Program

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Today

- Results from recent study on SNAP households' food and beverage purchase behaviors
- Introduction to upcoming study on where SNAP households shop for foods and beverages (no results)

Study 1: Household Food and Beverage Purchases

Background

Supplemental Nutrition Assistance Program (SNAP)

- Largest nutrition assistance program in the U.S.
 - ~45 million individuals in 2016 (1 in 7 Americans)
 - About 7% of SNAP households live in rural areas



Why study SNAP participants' purchase behaviors?

- SNAP serves large number of low-income households, who are at highest risk of diet-related diseases
- Identify specific areas to target with future interventions (e.g. SNAP-Ed)
- Understand whether policy proposals to change SNAP package can meaningfully impact overall nutritional quality



House Agriculture Committee to Debate SNAP Purchase Restrictions

Monday, February 13, 2017

Legislative Activity

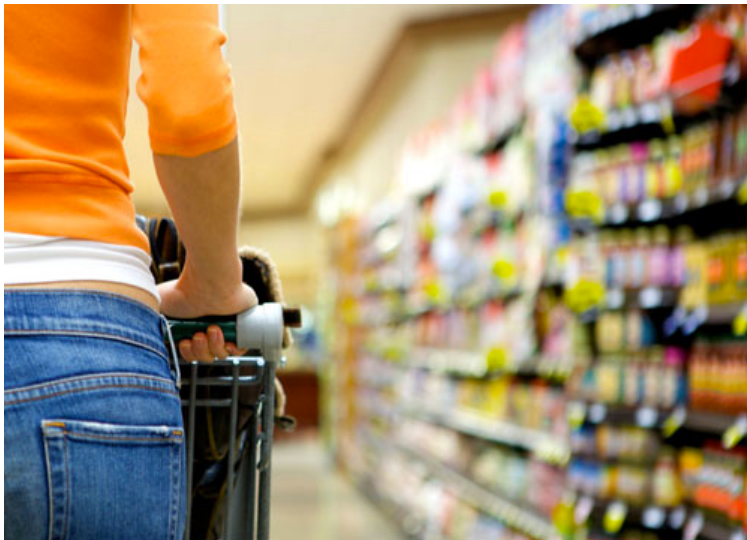
Objective

- Use a large, national electronic purchase dataset to describe SNAP households' packaged food and beverage purchases
 - Health- and policy-relevant outcomes
 - Compare to non-SNAP households for context

Methods

Data and sample

- **Data:** Nielsen Homescan Panelists from 3 quarters in 2012-2013
 - About 60,000 household/year
 - Scan barcodes of all packaged purchases
 - We link barcodes to detailed nutrition information



Data source

- Nearly all research on SNAP participants' diet-related behaviors has used interview-based measures
 - Electronic purchase data like Homescan can help triangulate previous work
 - Avoid recall-bias
 - Long-term
 - Detailed nutrition information

Predictor variable: SNAP Status

- SNAP status assessed every 6 months with 1 survey item
- Households categorized as:
 - Current SNAP participants
 - Income-eligible nonparticipants (household income \leq 130% FPL)
 - Higher-income nonparticipants (income $>$ 130% FPL)

Outcome variables

- Examined health- and/or policy-relevant outcomes



World Health Organization Says Processed Meat Causes Cancer

Article date: October 26, 2015

By Stacy Simon

The International Agency for Research on Cancer (IARC) has classified processed meat as a carcinogen, something that

Townhall > Tipsheet > Christine Rousselle

Maine Gov: Ban Soda From Food Stamps, Or We'll Shut The Program Down

22 outcomes examined

- 13 food categories
 - Including: Fruits, vegetables, desserts and sweets, salty snacks, candy, junk food
- 4 beverage categories
 - Sugar-sweetened beverages (SSBs), alcohol, milk, juice
- 5 nutrients
 - kcal, sodium, sugar, saturated fat, and fiber



Analysis

- Unadjusted mean purchases
- Adjusted mean purchases, controlling for demographics, household composition, market, total purchases
 - Pooled OLS with clustered standard errors
 - Bonferroni corrected alpha level
- Sensitivity analysis to account for missing data on SNAP question

Results

Results: Sample characteristics

- N = 98,256 household-by-quarter observations with complete data
- SNAP status:
 - 7% current participants
 - 6% income-eligible nonparticipants
 - 87% higher-income nonparticipants
- Some differences between SNAP and non-SNAP households in demographics
 - SNAP households younger, more children, less likely to have college degree, less likely to be married

Results: Unadjusted purchases

- Key finding: Average household (across groups) show room for improvement

Unadjusted Mean Purchases (per household member per day) (selected results)

Outcome	Current Participants	Income-Elig. Nonpartic	High-Income Nonpartic	2015 Dietary Guidelines Rec
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Results: Unadjusted purchases

- Average household (across groups) show room for improvement

Unadjusted Mean Purchases (per household member per day) (selected results)

Outcome	Current Participants	Income-Elig. Nonpartic	High-Income Nonpartic	2015 Dietary Guidelines Rec
Junk foods (kcal)	477	454	454	Limit/eliminate

Results: Unadjusted purchases

- Average household (across groups) show room for improvement

Unadjusted Mean Purchases (per household member per day) (selected results)

Outcome	Current Participants	Income-Elig. Nonpartic	High-Income Nonpartic	2015 Dietary Guidelines Rec
Junk foods (kcal)	477	454	454	Limit/eliminate
Total sat. fat (g)	27	23	24	≤ 22 g

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Total sodium (mg)	3018	2694	2603	≤ 1500-2300 mg

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Total fiber (g)	10	10	11	≥ 25 – 38 g

Unadjusted purchases of potentially restricted items

- Legislation proposed to restrict SNAP benefits from being used to purchase items such as candy, junk foods, and SSBs
 - SNAP households purchased considerable quantities of these items
 - **477 kcal** of junk foods
 - (Candy, sweeteners, desserts, salty snacks)
 - **89 kcal** of SSBs
- **Total of 565 kcal/person/day** in potentially restricted items



LePage Defends Push to Ban Junk Food Purchases with Food Stamps

By A.J. HIGGINS • JUN 23, 2016

Adjusted purchases: how do SNAP vs. non-SNAP compare?

- SNAP and non-SNAP (income-eligible and higher income) show similarities and differences in purchases
- No significant differences for purchases of:
 - Total vegetables
 - Legumes
 - Nuts
 - Dairy
 - Desserts and sweet snacks
 - Candy
 - Junk foods
 - Alcohol
 - Milk
 - Saturated fat
- Significant differences tend to favor non-SNAP households in healthfulness

Significant differences in purchases

Outcome (per person/day)	Current Participants Adj. Mean	Income-Eligible Nonpartic Diff in. Purchases	Higher-Income Nonpartic Diff. in Purchases
Fruits (kcal)	27	+4	+5
Processed meat (kcal)	57	-8	-8
Salty snacks (kcal)	134	+12	+11
Sweeteners (kcal)	79	-11	-12
Sugar-sweetened bev (kcal)	74	-15	-21
Total kcal	1537	-63	-70
Sugars (g)	102	-7	-8
Fiber (g)	11	+0.5	+0.5
Sodium (mg)	2617	-170	-195

*All differences reported were significant at the Bonferroni-corrected alpha of 0.0023 with clustered SEs
Adjusting for: demographics, household composition, market,

Some differences are small

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*All differences reported were significant at the Bonferroni-corrected alpha of 0.0023 with clustered SEs
Adjusting for: demographics, household composition, market,

Some differences are potentially meaningful

Outcome (per person/day)	Current Participants Adj. Mean	Income-Eligible Nonpartic Diff in. Purchases	Higher-Income Nonpartic Diff. in Purchases
Fruits (kcal)	27	+4	+5
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All but one favor non-SNAP

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Sensitivity analysis: Adjusting for missing SNAP status

- All results robust when using IPWs to adjust for missingness of SNAP status

Discussion

Limitations

- Data capture packaged food and beverage purchases
 - No information on loose produce, bakery items, bulk grains, deli items
 - No information on restaurant/fast food purchases
 - No information on consumption
- Cross-sectional, descriptive analyses only
 - SNAP participants may be different from nonparticipants

Summary and implications

- Average household (regardless of SNAP status) shows room for improvement
- SNAP households purchase fewer fruits, fiber and more processed meat, SSBs, calories, sodium, sugars
 - SNAP-Ed might add more information on these areas
- High purchases of potentially restricted items (SSBs, junk foods)
- More information in AJCN (2017) article

Nutritional profile of Supplemental Nutrition Assistance Program household food and beverage purchases^{1,2}

Anna H Grummon^{3,5} and Lindsey Smith Taillie^{4,5}*

Upcoming Study

Background

- Low-income households tend to be in worse food environments
- Interventions have focused on:
 - Increasing access to grocery stores
 - Improving food environment in convenience stores
- Limited research on:
 - Where SNAP households shop
 - Whether/how nutritional profile of household purchases varies with retailer type and SNAP status

Upcoming study: Overview

- Nielsen Homescan data from 2011-2014
- **Objective 1:** Investigate where SNAP and non-SNAP households purchase foods and beverages
 - Describe volume/calories, foods, beverages, and nutrients purchased from different store types (grocery stores, mass merchandisers, convenience stores)
 - Potential implication: Are convenience stores a considerable source of calories for SNAP households?

Upcoming study: Overview

- Nielsen Homescan data from 2011-2014
- **Objective 1:** Investigate where SNAP and non-SNAP households purchase foods and beverages
- **Objective 2:** Compare the nutritional profile of SNAP and non-SNAP purchases *within* each retailer type
 - Ex: compare nutritional profile of grocery store purchases between SNAP vs. non-SNAP
 - Potential implication: do SNAP purchases ‘catch up’ to non-SNAP purchases when those purchases are made at grocery stores?

Thank you!

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