

Midwestern Regional Grocery Store Chain Canned & Frozen Vegetable Sales

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BEHAVIORAL NUTRITION & PHYSICAL ACTIVITY LABORATORY

Background

- Canned vegetables contain higher sodium than frozen vegetables, which is associated with chronic disease
- Canned are less expensive than frozen, which is accessible on a limited budget
- Understanding purchasing patterns of low-income Oklahomans will provide data to guide future public health interventions.

Objective

- Describe overall canned & frozen vegetable sales in Oklahoma
- Determine differences in canned & frozen vegetable sales by store's shopper income

Study Design, Settings, Participants

- Cross-sectional, secondary analysis of canned & frozen vegetable sales from Dec. 2012 - Aug. 2015 of a Midwestern regional grocery chain in Oklahoma (n=64 stores)
- Units sold were pair-matched by preparation & averaged across 144 weeks
- SNAP Sales were a proxy for store's shopper SES (high SNAP sales = lower shopper SES)
- High SES stores (n=16, bottom quartile) had 5.7% SNAP sales & low SES stores (n=16, top quartile) had 14.7% SNAP sales

Table 1: Total Number of Vegetable Units Sold & Percentage of Vegetable Units Sold by Type for All Stores (n = 64)

Type	# Units Sold (thousands)	% Total Units Sold
Canned	7,915.3	78.7%
Frozen	2,146.6	21.3%

Figure 1: Percentage of Canned Sales Relative to Total Canned & Frozen Vegetable Sales Stratified by Store SES *(p<0.0001, 95%CI: 0.06-0.13)

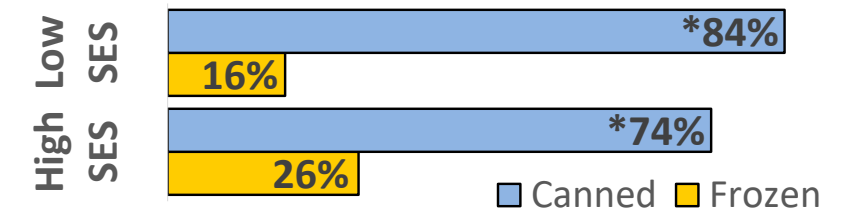


Table 2: Total Number of Units Sold by Vegetable Type for All Stores in a Midwestern Regional Grocery Store Chain (n = 64)

Vegetable	Frozen Rank	# Frozen Units (thousands)	% Total Frozen Units	Canned Rank	# Canned Units (thousands)	% Total Canned Units
Asparagus	8	17.5	0.8%	7	99.4	1.3%
Carrots	7	45.6	2.1%	5	276.3	3.5%
Corn	2	686.4	32.0%	2	2,588.8	32.7%
Green Beans	4	208.6	9.7%	1	3,045.0	38.5%
Lima Beans	6	51.4	2.4%	8	80.1	1.0%
Mixed Veggies	1	728.9	34.0%	4	289.0	3.7%
Peas	3	314.0	14.6%	3	1,318.5	16.7%
Spinach	5	94.0	4.4%	6	218.2	2.8%

Conclusions

- Low SES stores sell more canned vegetables than high SES stores in Oklahoma
- Data are representative of Oklahoma sales & comparable to national trends
- Findings demonstrate a need to understand how individuals living in low SES households make purchasing decisions to improve public health intervention strategies attempting to improve diet quality