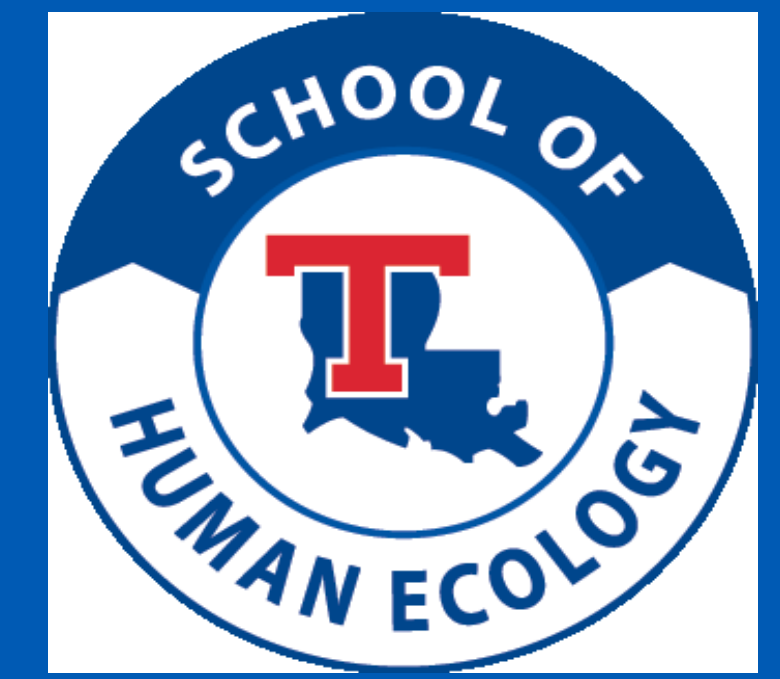


COLLEGE STUDENTS' GROCERY SHOPPING FOOD SAFETY PRACTICES DURING THE COVID-19 EXPERIENCE



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BACKGROUND

Grocery shopping behaviors that support food safety among college students is not well documented. COVID-19 pandemic efforts related to hygiene practices may have improved these by increasing hand sanitizing, grocery cart cleansing, and altering food packaging and storage. Differences in practices have been identified among urban, suburban, and rural consumers in the literature, but not specifically in college-age students.

PURPOSE

To assess grocery shopping behaviors of college students during the COVID-19 experience.

MATERIALS AND METHODS

A cross-sectional online survey was conducted in Spring 2020 using network sampling of university students ≥ 18 years of age. A subset of the 89 questions was used for this study. Forty-six questions were scored to yield a total food safety practice score.

Demographics (n = 282)		
	n	%
Sex		
Male	60	21.3%
Female	220	78%
Transgender	1	0.4%
Race		
White, non-Hispanic	225	79.8%
White, Hispanic	14	5%
African American or Black	4	8.5%
Native American or Alaskan Native	0	0%
Asian, Pacific Islander	4	1.4%
Indian (Southwest or Subcontinental)	2	0.7%
Middle Eastern	2	0.7%
Bi-Racial	5	1.8%
Multi-Racial	1	0.4%
Other	4	1.4%
Area of Residence		
Urban	60	21.3%
Suburban	147	52.1%
Rural	73	25.9%

Have you seen anti-bacterial cart wipes at the grocery stores? (n = 282)		
Yes	No	Missing
186 (66%)	32 (11.3%)	64 (22.7%)

RESULTS

There were 282 respondents: 21.4% urban, 52.4% suburban, and 26.1% from rural areas. Approximately 55% indicated responsibility for household grocery shopping. The majority purchased groceries from a supercenter with location, price, and quality of products identified as primary reasons for this choice. Chi-square tests revealed no significant difference in total food safety practice scores among residential areas, however, differences ($p < 0.05$) were found for individual behaviors related to poultry and meat selection, cart placement, and storage; produce selection and storage; and use of cooling bags. Cloth bags were used by 25% of students, with 3% following laundering recommendations.

Are you the person who usually does the grocery shopping in your household? (n = 282)		
Response	n	%
Yes	72	25.5%
No	70	24.8%
Split Equally	87	30.9%
Other	53	18.8%

Where do you get the majority of your groceries? (n = 282)		
Response	n	%
Grocery Store	83	29.4%
Supercenter	135	47.9%
Warehouse Store	5	1.8%
Discount Store	2	0.7%
Drug or Convenience Store	3	1.1%
Grocery Store and Superstore	1	0.4%
Walmart, Sam's, and Target	1	0.4%
Other	54	19.1%

What is the primary reason you shop at a store? (n = 282)		
Response	n	%
Price	48	17%
Location	82	29.1%
Quality of Products	29	10.3%
Customer Service	2	0.7%
All of the above	3	1.1%
Convenience	1	0.4%
Curbside Service	4	0.1%
Curbside Service and Price	1	0.4%
I do not get my own groceries	1	0.4%
It is what I have always done	1	0.4%
Only store to buy a variety of food from a 40+ mile radius	1	0.4%
Pharmacy	1	0.4%
Price and availability	1	0.4%
Price, location, variety, and pharmacy	1	0.4%
Quantity	1	0.4%
Other	54	19.1%

Collegiate Student Grocery Shopping Food Safety – Area of Residence (N = 280)			
Question	Number of Correct Answers		
	Urban (n = 60)	Suburban (n = 147)	Rural (n = 73)
How often do you use anti-bacterial grocery care wipes at the grocery store?	8 (13.3%)	9 (6.1%)	6 (8.2%)
When arranging foods in your grocery cart, do you place meat, fish, and poultry products below all other items?	19 (31.7%)	41 (27.9%)	23 (31.5%)
Do you place your hand in a plastic bag (used as a glove) while selecting meat, fish, or poultry?	2 (3.3%)	20 (13.6%)	11 (15.1%)
When grocery shopping, do you place your meat, fish, and poultry products in a plastic bag prior to placing in your cart?	11 (18.3%)	48 (32.7%)	22 (30.2%)
When shopping, do you use hand sanitizer or wash your hands after selecting poultry?	9 (15%)	25 (17%)	18 (24.7%)
Do you use hand sanitizer or wash your hands after selecting meat?	8 (13.3%)	24 (16.3%)	18 (24.7%)
Do you use hand sanitizer or wash your hands after selecting fish?	6 (10%)	16 (10.9%)	14 (19.2%)
Do you use hand sanitizer or wash your hands before selecting fresh fruits or vegetables?	5 (8.3%)	18 (12.2%)	12 (16.4%)
Do you select your refrigerated items at the end of your grocery store trip?	28 (46.7%)	56 (38.1%)	43 (58.9%)
During the hot months of the year, do you put your refrigerated items in cooling bags before driving home?	7 (11.7%)	11 (7.5%)	11 (15.1%)
Do you take your meat, fish, and poultry products out of their plastic bags before placing them in the refrigerator?	28 (46.7%)	42 (28.6%)	34 (46.6%)
Do you place the meat, fish, and poultry products at the bottom of your fridge below all produce products?	21 (35%)	38 (25.9%)	23 (31.5%)
Do you leave your produce products within the plastic bag when placing them in the fridge?	10 (16.7%)	36 (24.5%)	24 (32.9%)
Do you wash your fruits and vegetables before eating them?	56 (93.3%)	136 (92.5%)	66 (90.4%)

Reusable Grocery Bag Usage (n=282)				
Do you own reusable cloth grocery bags?				
	Yes 73 (25.9%)	No 145 (51.4%)	Missing 64 (22.7%)	
How often do you use your cloth grocery bags?				
	More than once a week 7 (2.5%)	Weekly 32 (11.3%)	Monthly 13 (4.6%)	A few times a year 18 (6.4%)
	Does Not Apply/Missing 212 (75.2%)			
How often do you wash/laundry your cloth grocery bags?				
	Every time I use them 2 (0.7%)	Weekly 6 (2.1%)	Monthly 15 (5.3%)	A few times a year 47 (16.7%)
	Does Not Apply/Missing 212 (75.2%)			

CONCLUSIONS

College students report inadequate frequency of grocery shopping food safety practices despite the public emphasis on hygiene practices. Differences in specific behaviors among urban, suburban and rural college students may guide intervention efforts.

SELECTED REFERENCE

Newsad, R., Ripley, D., & Shepherd, C. A. (2016). Assessed Food Safety Risks Associated with Grocery Stores. *Journal of Environmental Health*, 16-21. Retrieved from <https://ezproxy.latech.edu:2054/stable/26330556>.