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Abstract

Background: Panic buying is a well-practiced behavior related to COVID-19 where individuals purchase food in greater quantity and speed due to emergency or feared lack of supply. Mind Genomics™ is the psychological science of analyzing decisional processes to identify true internal thoughts. This study mapped out the decisional processes of undergraduates regarding panic buying, to reveal distinct segments of thinking.

Methods: A cross-sectional, web-based survey was completed by 200 undergraduates enrolled at Louisiana State University in early 2021. The 30-item survey included questions on demographics, comfort, finances, COVID-19 diagnosis, and 16 literature-driven elements related to panic buying.

Results: The majority white (79.6%) sample fell into two mindsets. One mindset (n=98) focused on nutrient content (i.e., fresh not frozen, long shelf life, only what is available for their diet) when buying food during COVID-19. A smaller subset (n=65) had additional concern, buying what appeared healthy and shopped to feel in control. The white students had significantly higher financial means (p=.022) and higher comfort (p< .001) than the Black students to shop for and purchase food during COVID-19.

Conclusion: When college students are faced with a pandemic there is a large focus on nutrient content when buying food. It is important to reinforce that students know how to find healthy foods that fit their diet. To better enable students to obtain nutritious foods, college health educators should help build good shopping habits while acknowledging that not all students have the same means to acquire what is needed.

Background

- Conducted under mentorship of Dr. Erin McKinley
- Panic buying is a well-practiced behavior related to COVID-19 where individuals purchase food in greater quantity and speed due to emergency or feared lack of supply.
- Mind Genomics™ is the psychological science of analyzing decisional processes to identify true internal thoughts. This science was founded by Howard Moskowitz, Ph.D., in 2014.
- The participants' responses to stimuli, or their "gut response," is analyzed to gage the importance of that stimuli to the participant. Data is analyzed by the BimiLeap system (specific to Mind Genomics studies), which then clusters the participants into segments (mindsets) based on variability of participants.

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Subjects and Methods

Subjects:
- The study population included convenience sample of a total of 200 undergraduate students (ages 18 – 38) enrolled at Louisiana State University in spring of 2021.
- This sample was acquired in the MGT 3200 online course.

Methods:
- A cross-sectional, web-based survey of 41 questions was completed using Qualtrics and the BimiLeap survey platform.
- The 30 BimiLeap survey questions consisted of one open-ended question, three demographic questions (sex, age range, and birthday), one 9-point Likert-scale preparation question, and 24 vignettes containing two to four of the original 16 elements related to panic buying.
- Qualtrics housed 11 additional demographic questions and items pertaining to COVID diagnosis, comfort with shopping, financial means to shop, household size, and responsible shopping party in the household.
- A short pilot study was conducted prior to the full study to test the survey system for comprehensibility, survey time, and assessment of any technical difficulties. The pilot (among a similar sample) revealed the need to improve survey question wording for better participant understanding.
- Final BimiLeap documentation includes results from a cluster analysis method of case segmentation and ordinary least squares regression that revealed the distinct segments of thinking related to panic buying. (Refer to Table 1)
- Students were not compensated for their time participating and were not at any increased risk taking the survey than normally experienced in everyday life

Results

- After the sample was segmented into 2 mindsets, only segment two of two (n=98) showed resonance with elements (coefficient ≥8), and resonance was limited to quadrant A (A1-4), which focused on nutrient content (fresh not frozen, foods with long shelf life, what appears healthy, what is available for diet).
- When the sample was further segmented into 3 mindsets, only segment 3 of 3 (n=65) showed resonance, once again limited to quadrant A. Additional resonance occurred with element C2 (shopping due to feeling a lack of control due to circumstances).
- A series of ANOVAs conduction on the demographic information revealed there was a significantly higher comfort level with going out and shopping in public among the Caucasian students (p<.001) compared to the Black students.
- The Caucasian students also reported significantly higher financial means to buy the food they need (p=.022) than the Black and Asian students.

Table 1. BimiLeap Output: Summary of Mindsets

Group (Binary Ratings)	Total	Segment 1 of 2	Segment 2 of 2	Segment 1 of 3	Segment 2 of 3	Segment 3 of 3
Base Size	200	102	98	63	72	65
Additive Constant	29	32	25	22	40	23
Question A: Concern with Nutrient Content						
A1 Buying fresh not frozen	2		10			13
A2 Buying foods with a long shelf life	3		9		2	10
A3 Buying what appears to be healthy			7			9
A4 Buying only what is available for my diet	3		8		1	11
Question B: Concern with Qty/Servings/Price						
B1 Buying as high of a quantity that is available				2		7
B2 Buying larger or family size packages				5		2
B3 Getting the most I can within my budget				7		5
B4 Grabbing the items I can that are fast and easy to carry out				7		2
Question C: Personal Feelings and Emotions						
C1 Shopping because I am stressed out	1		7	2		6
C2 Shopping because I feel out of control of the situation			5			8
C3 Shopping because I am afraid the stores will run out of food	1		6	1		3
C4 Shopping because I need to feel more secure			5			6
Question D: Environmental Factors						
D1 Feeling COVID-19 is not getting better in my area			4		6	
D2 Feeling like I must always be prepared for the worst			5		5	2
D3 Worrying that I am at risk for getting COVID-19			6		3	7
D4 Worrying that my roommates or family will not buy what is really needed		7			4	7

Conclusions and Implications

- The large resonance within quadrant A suggests that when college students are faced with buying food in a pandemic, there is a large focus on nutrient content.
- For the most part, only marginal resonance occurred with elements pertaining to budget, emotional stressors, and environmental stressors.
- Overall, results suggest that college students focus on food composition in panic buying situations, and even strive to buy healthy options.
- Therefore, it is important to reinforce that students have access to healthy foods that fit their diet.
- To better enable students to obtain nutritious foods, college health educators should help them build good shopping habits while acknowledging that not all students have the same means to acquire what is needed.

References

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