



A psychographic analysis of food purchasing attitudes and preferences as a result of the Coronavirus Disease 2019 (COVID-19) Pandemic

Julianna Bohigian, Cheryl Rock, Ph.D., Christine Costa, DNP, Youngok Jung, Ph.D., Dustin Moore, M.S.

Department of Family & Consumer Sciences

College of Health & Human Services, California State University Long Beach

Introduction

Coronavirus disease 2019 (COVID-19) has been circulating in the United States for over two years. As a result, many Americans have reported a variety of constraints and lifestyle shifts. The food supply chain is a specific area that has been greatly affected. **Restaurants** and **grocery stores** have had to cater to consumer needs and desires, while following precautionary measures. **Today**, it remains to be seen if consumer demand has significantly changed because of the pandemic. This research study sought to assess participants' changes in food purchasing from before the pandemic to a time point during the pandemic.



Methods

- Approval** – Institutional Review Board & Family and Consumer Sciences Department Chair
- Cross-sectional design** – Variables could not be manipulated, and information was being sought on what was happening in a certain population during the COVID-19 pandemic
- Convenience sampling** – Flyer sent via university email contact and social media outreach.
- Snowball sampling** – Recruited participants were encouraged to share the link with their own network
- Instrumentation** – Demographic questionnaire, COVID-19 Food Attitude (FACT) Rating Scales, Preference Ranking Tests (Figure 1A and B)
- Data Analysis** – Descriptive statistics for demographic data; Kendall's tau-b for FACT and Preference scales

A

B

Pre-COVID-19
Preference Ranking Scale Score Card

Preference: Food Purchase Drivers

Please indicate your preference pre-COVID-19 by ranking the purchase drivers (1-7).

___ Taste
___ Price
___ Convenience
___ Sustainability
___ Cuisine (e.g., Italian, Mexican, American etc.)
___ Food Safety
___ Nutrition

Current-COVID-19
Preference Ranking Scale Score Card

Preference: Food Purchase Drivers

Please indicate your preference pre-COVID-19 by ranking the purchase drivers (1-7).

___ Taste
___ Price
___ Convenience
___ Sustainability
___ Cuisine (e.g., Italian, Mexican, American etc.)
___ Food Safety
___ Nutrition

Figure 1A and B. Examples of pre- and current-COVID-19 food preference ranking scales.

Results

- Total participants=76
- Majority female (84.21%)
- Majority 21-30 years old
- Majority White (39.47%), Hispanic or Latino (23.68%), and Asian (14.47%)
- ~Half of participants were full-time workers (46.05%)
- ~Half of the participants (55.26%) were enrolled in college
- Majority purchased food on their own income (Figure 2)
- The average amount of food spending was divided into 8 distinct categories (Figure 3)
- Majority **did not** identify as food insecure (77.63%)
- No statistically significant differences in food purchasing attitudes as a result of the COVID-19 pandemic
- No statistically significant differences in food purchasing preference drivers or locations as a result of the COVID-19 pandemic

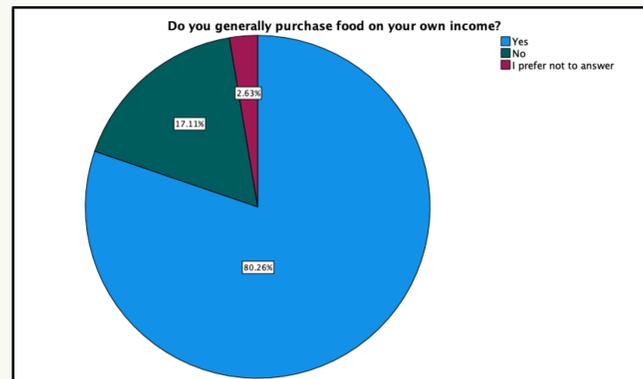


Figure 2. Pie chart representing participants who purchase food on their own income versus those that do not.

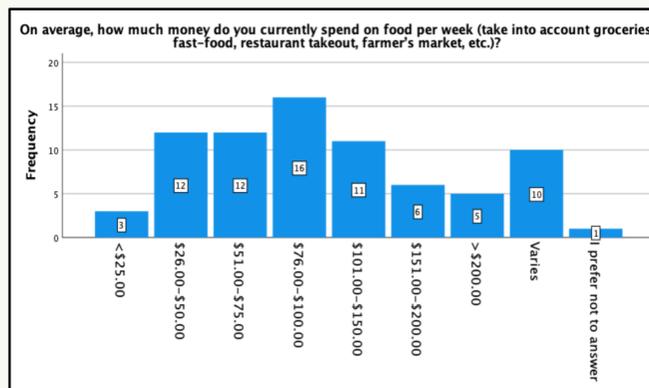


Figure 3. Bar graph representing the average amount of money participants spend on food per week.

Discussion & Limitations

- All Kendall's tau-b coefficients were large and positive at the $p = <.05$ level, indicating a monotonous positive relationship (Table 1)
- In this study, food purchase attitudes, preference drivers, and preference locations **did not yield any significant change** between the pre-COVID-19 and current-COVID-19 responses
- Smaller sample size
- Retrospective study – asked to recall information
- May need to assess the long-term effects post-pandemic

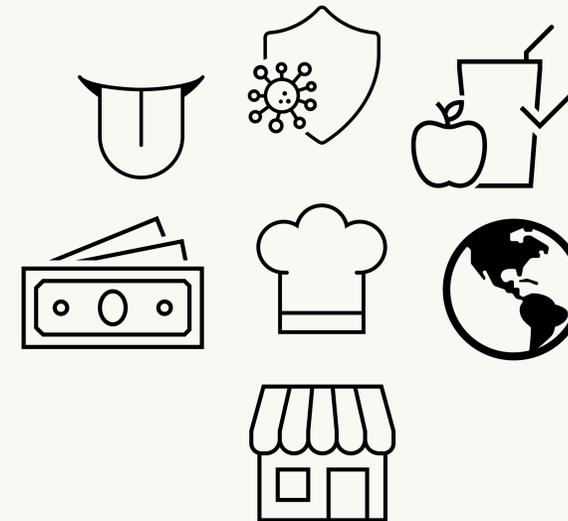


Table 1. Results from Kendall's tau-b analysis of food purchasing driver preferences amongst participants.

Food Purchase Driver (preferences)	Kendall's tau-b Coefficient	p-value
Taste	$\tau_b = .610$	$p = <.001$
Price	$\tau_b = .609$	$p = <.001$
Convenience	$\tau_b = .424$	$p = <.001$
Sustainability	$\tau_b = .770$	$p = <.001$
Cuisine	$\tau_b = .666$	$p = <.001$
Food Safety	$\tau_b = .541$	$p = <.001$
Nutrition	$\tau_b = .622$	$p = <.001$

Conclusion

Overall, changes in food purchasing attitudes and preferences due to the COVID-19 pandemic amongst the sample group were not significant. This study provides insight for food-centered professionals in which the current major event (COVID-19 pandemic) may have little to no effect on food purchasing trends amongst consumers. Future time points during the pandemic may bode different findings.

Acknowledgements

Special thanks to Dr. Cheryl Rock, Dr. Christine Costa, Professor Dustin Moore, and Dr. Youngok Jung for supporting my work. I would also like to thank Dr. Selena Nguyen-Rodriguez, Dr. Wendy Reiboldt, and John Ciulik for their supplemental assistance.

References

Bentley, A. (1996). Introduction (Eds.) Food and Foodways: Explorations in the History and Culture of Human Nourishment (Vol. 6, 2nd ed. pp. 73-79). <https://doi.org/10.1080/07409710.1996.9962030>

Brujin, S. E. M., Vries, Y. C., Graaf, C., Boesveldt, S., & Jager, G. (2017). The reliability and validity of the Macronutrient and Taste Preference Ranking Task: A new method to measure food preferences. *Food Quality and Preference*, 57, 32-40. <https://doi.org/10.1016/j.foodqual.2016.11.003>

Lawless H.T. & Heymann H. (1999). *Acceptance and Preference Testing*. In *Sensory Evaluation of Food*. Springer, Boston, MA. https://doi.org/10.1007/978-1-4615-7843-7_13

Massaglia, S., Borra, D., Peano, C., Sottile, F., & Merlino, V. M. (2019). Consumer preference heterogeneity evaluation in fruit and vegetable purchasing decisions using the Best-Worst approach. *Foods*, 8(7), 266. <https://doi.org/10.3390/foods8070266>

Naja, F., & Hamadeh, R. (2020). Nutrition amid the COVID-19 pandemic: a multi-level framework for action. *European journal of clinical nutrition*, 74(8), 1117-1121. <https://doi.org/10.1038/s41430-020-0634-3>

Singh-Ackbarali, D., & Maharaj, R.T. (2014). Sensory evaluation as a tool in determining acceptability of innovative products developed by undergraduate students in food science and technology at the University of Trinidad and Tobago. *Journal of Combinatorial Theory, Series A*, 3, 10-27.