

The Role of a Rational Decision-Making Style in the Translation of Wellness Information Search to Diet Adoptions

Heejae Lee, University of Georgia¹
Dee Warmath, University of Georgia²
Sheri Worthy, University of Georgia³

Background

Studies have consistently shown the importance of a nutritionally balanced diet in health and well-being (Nestle, 2007). Yet many consumers are making poor diet choices, often with good intentions to eat well. One factor that has been associated with decision-making is information processing, in which consumers search for information and then use that information to make their decision (Stankevich, 2017). The assumption underlying these views of information search is that consumers will use the information in a rational approach in their decision-making (Lynch & Wood, 2006). Rational choice theory would suggest that more information is better (Rutar, 2019). Yet there is an observed gap between a desire for information and the use of information in decision-making (Stankevich, 2017) that may be explained by individual differences in the decision-maker (Moorman, 1990). We argue that decision-making style is an important individual difference that has not received sufficient attention. A more rational decision-making style would be associated with greater processing of the information gathered, while a less rational style might lead to truncated search and less processing (De Palma et al., 1994). Thus, the relationship between information search and diet decision would depend on whether the individual had a more (or less) rational decision-making style. Support for our argument would suggest that efforts to improve information search should include a focus on the individual's ability to use the knowledge gained in making food choices.

The food choice considered in this study is adoption of a trendy diet. Such adoption may represent a poor diet choice when there is little to no evidence for long-term health benefits or weight loss efficacy (e.g., ketogenic diet [keto; O'Neill & Raggi, 2020], paleolithic diet [paleo; Jospe et al., 2020], and intermittent fasting [IF; Barnard et al., 2018]). With such diets, the evidence for health benefits or weight loss may be largely anecdotal or vary considerably across gender, ages, health status, and other conditions. In other cases, however, the diet has been associated with numerous health benefits (Dinu et al., 2018) as well as weight loss effectiveness (Poulimeneas et al., 2020). The Mediterranean diet is an example of a nutritionally-sound eating plan recommended by health experts. This diet consists of mostly plant-based foods and moderate amounts of dairy, fish, poultry, and red meat (Kafatos et al., 2000). Multiple research studies have associated the Mediterranean diet with better longevity and overall health, lower body weight, and weight loss (Dinu et al., 2018; Panagiotakos et al., 2006; Poulimeneas et al., 2020). The Mediterranean diet has also shown a positive relationship with successful weight loss maintenance over time (Poulimeneas et al., 2020).

Purpose

This study examines the role of wellness decision-making style in the likelihood of an individual adopting a trendy diet and whether the relationship between information search and diet adoption depends on decision-making style.

Research Questions

- Hypothesis 1: More rational decision-makers will be less likely to adopt a trendy diet.

¹ Heejae Lee (hjhannahlee@uga.edu), Ph.D. Student, Department of Financial Planning, Housing and Consumer Economics

² Dee Warmath (warmath@uga.edu), Assistant Professor, Department of Financial Planning, Housing and Consumer Economics

³ Sheri Worthy ([sworthy@uga.edu](mailto:seworthy@uga.edu)), Samuel A. and Sharon Y. Nickols Professor and Associate Dean for Academic Programs

- Hypothesis 2: The relationship between information search and adoption of a trendy diet will depend on the individual's decision-making style, with the effect of information search having a more negative association for more rational decision-makers.

Methodology

Data were collected through a 12-minute Qualtrics survey with adults ages 18+ selected from the Dynata panel. The survey examined overall health and wellness familiarity, knowledge, attitudes, and behavior of US adults, with a special focus on eating, physical activity, sleep, and psychological well-being. Data were collected in April 2020 during the COVID-19 self-quarantine period. Excluding incomplete responses and those with extreme completion duration, there were 424 usable responses out of the balanced sample of 546.

Adoption was assessed through a single question: "Have you ever engaged in any of the following eating plans?" A binary indicator for each diet was constructed from the answers given. If the answer was "Yes, currently" or "Yes, in the past," the individual was assigned a value of 1 (adopted). If the answer was "Never," the individual was assigned a value of 0 (not adopted). If the individual was not aware of the diet (answer = "I know nothing about this eating plan"), no adoption decision can be assumed. These unaware individuals were set to missing for that diet.

The primary independent variables for this study were wellness decision-making and wellness information search. Wellness decision-making (i.e., decision-making style) was measured using a scale adapted from General Decision-Making Style (Scott & Bruce, 1995) to fit the wellness context. Possible scores for this variable ranged from a low of 10 to a high of 50. A higher wellness decision-making score means being a more rational agent and strategic decision-maker. The wellness information search (i.e., general ability to search for and understand wellness-related information) was measured using the Health Literacy Scale for Workers (Azizi et al., 2019). Possible scores for this variable ranged from a low of 3 to a high of 15.

Demographic control variables included a continuous age, gender, race, and income. Age was calculated from year of birth. Income was asked in 8 categories and included as an ordinal bracket variable. The reference categories for gender and race were female and white with male and non-white being the comparison categories.

Binary logistic regression in SPSS Version 27 was used to evaluate the hypotheses. Continuous variables were mean-centered before the creation of interaction terms.

Results

Overall, 51% of the sample had adopted at least one of the diets considered. The highest percent adopted Intermittent Fasting (35.1%) followed by the Mediterranean Diet (32.1%), the Keto Diet (23.8%), and the Paleo Diet (19.3%). We observed that 20.5% of the participants had adopted only one of these diets, with the remainder of the adopters having tried more than one of these diets. On a scale from 3 (Less) to 15 (More), the mean information search was 12.6, with a standard deviation of 2.3. On a scale from 10 (Less Rational) to 50 (More Rational), the mean was 33.1, with a standard deviation of 5.8.

Across the four diets, we observed a negative relationship between wellness decision-making style and adoption of a trendy diet, controlling for demographics (Table 1). This suggests that consumers with a less rational decision-making style have a higher probability of adopting a trendy diet. Thus, Hypothesis 1 is supported.

Examining the moderating role of decision-making style, we found that the relationship between wellness decision-making style and adoption of a trendy diet depended on decision-making style for one of the four diets (the Paleo Diet). The interaction term was not significant for the other three diets considered. Thus, Hypothesis 2 was supported only for the Paleo Diet. The significant interaction term for this diet suggests that the negative association between information search and adoption becomes stronger for consumers with more rational decision-making styles, as would be expected.

Table 1.
Relationship Between Decision-Making Style and Adoption of a Trendy Diet

Variable	Paleo Diet	Intermittent Fasting	Mediterranean Diet	Keto Diet
----------	------------	----------------------	--------------------	-----------

Decision-making Style	0.888***	0.942**	0.956*	0.896***
<i>Control Variables</i>				
Age (in Years)	0.943***	0.983*	0.994	0.956***
Female (vs Male)	0.410**	1.282	0.820	0.734
Income	1.103	1.126*	1.064	1.126*
White (vs non-White)	0.446*	0.535*	1.067	0.863
Constant	148.977***	5.453**	2.299	56.281***
Nagelkerke R ²	0.339	0.127	0.033	0.264
% Classified Correctly	84.0%	69.1%	68.6%	81.6%

Note: Cell contents are Exp(b); * p<.05; ** p<.01; *** p<.001

Table 2.

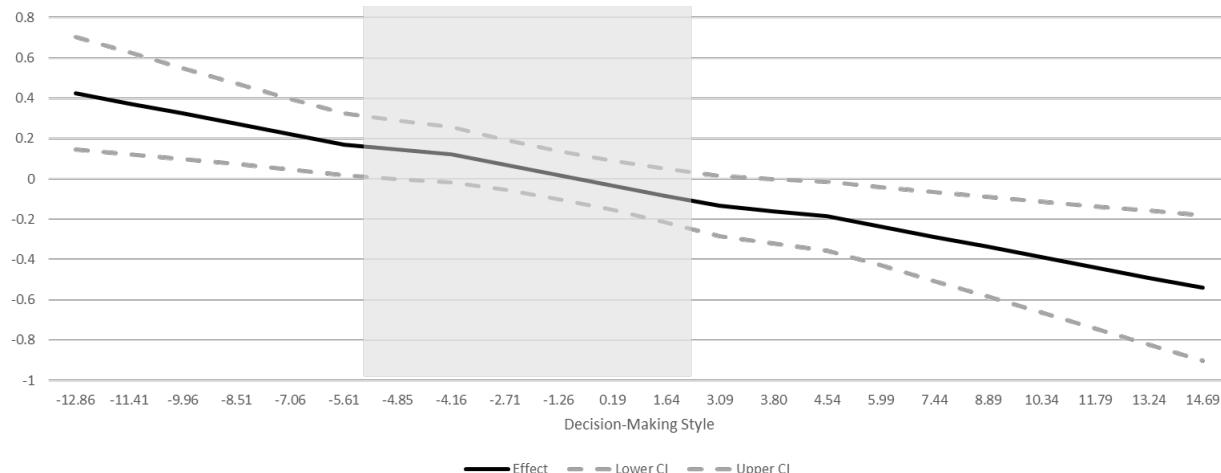
Effect of Wellness Information Search on Relationship Between Decision-Making Style and Adoption of a Trendy Diet

Variable	Paleo Diet	Intermittent Fasting	Mediterranean Diet	Keto Diet
Information Search	0.934	1.051	1.093	1.099
Decision-making Style	0.888***	0.940**	0.948*	0.891*
Information Search * Decision-making Style	0.966**	0.996	1.003	1.001
<i>Control Variables</i>				
Age (in Years)	0.942***	0.982*	0.993	0.955***
Female (vs Male)	0.375**	1.299	0.838	0.755
Income	1.099	1.124*	1.060	1.121*
White (vs non-White)	0.464	0.525*	1.018	0.825
Constant	389.398***	3.285	1.044	21.823**
Nagelkerke R ²	0.372	0.132	0.043	0.272
% Classified Correctly	84.7%	70.3%	70.0%	82.1%

Note: Cell contents are Exp(b); * p<.05; ** p<.01; *** p<.001

Figure 1.

Johnson Neyman Plot of the Interaction Between Information Search and Decision-Making Style in the Probability of Adopting the Paleo Diet



Conclusions/Relevance

The results suggest that consumers who use a more rational decision-making style are more likely to make a “better” decision by not choosing to adopt these trendy diets. The paleo diet findings suggest that such a decision-making style may enhance the consumer’s ability to use information and may serve as a protective factor in wellness decision-making. There are some possible explanations for why this finding did not hold for other diets: The efficacies of intermittent fasting and keto tend to vary more, but the paleo mostly showed less promising outcomes, suggesting that disadvantages of paleo may be more evident upon information search. It is also interesting to note that Mediterranean diet, although most ideal, was no different in the eyes of consumers; it was perceived similarly to other, more controversial diets. The implication of our findings is that family and consumer science educators should seek ways to promote a more rational decision-making style in nutrition and diet educational programs and to focus on the individual’s ability to maximize the knowledge gained in making food choices.

References

- Azizi, N., Karimy, M., Abedini, R., Armoon, B., & Montazeri, A. (2019). Development and validation of the health literacy scale for workers. *International Journal of Occupational & Environmental Medicine*, 10(1), 30–39. <https://doi-org.proxy-remote.galib.uga.edu/10.15171/ijom.2019.1498>
- Barnard, J.D., Snowdon, D., & Hewitson, L. (2017). Dietary interventions for weight loss and essential aspects of nutrition post-bariatric surgery. *Practical Guide to Obesity Medicine*, 315.
- De Palma, A., Myers, G. M., & Papageorgiou, Y. Y. Rational choice under an imperfect ability to choose. *The American Economic Review* (1994): 419-440. <https://www.jstor.org/stable/1337078>
- Dinu, M., Pagliai, G., Casini, A., & Sofi, F. (2018). Mediterranean diet and multiple health outcomes: an umbrella review of meta-analyses of observational studies and randomised trials. *European journal of clinical nutrition*. 72(1), 30–43. <https://doi.org/10.1038/ejcn.2017.58>
- Jospe, M. R., Roy, M., Brown, R. C., Haszard, J. J., Meredith-Jones, K., Fangupo, L. J., Osborne, H., Fleming, E. A., & Taylor, R. W. (2020). Intermittent fasting, Paleolithic, or Mediterranean diets in the real world: Exploratory secondary analyses of a weight-loss trial that included choice of diet and exercise. *The American journal of clinical nutrition*, 111(3), 503-514. <https://doi.org/10.1093/ajcn/nqz330>
- Kafatos A, Verhagen H, Moschandreas J, Apostolaki, I., & Van Westerop, J. J. (2000). Mediterranean diet of Crete: Foods and nutrient content. *Journal of the American Dietetic Association*, 100(12), 1487–1493. [https://doi.org/10.1016/s0002-8223\(00\)00416-8](https://doi.org/10.1016/s0002-8223(00)00416-8)
- Lynch, J. G. Jr., & Wood, W. Special issue editors' statement: Helping consumers help themselves. (2006). *Journal of Public Policy & Marketing* 25(1), 1-7. <https://doi.org/10.1509/jppm.25.1.1>

- Moorman, C. (1990). The effects of stimulus and consumer characteristics on the utilization of nutrition information. *Journal of Consumer Research*, 17(3), 362-374. <https://doi.org/10.1086/208563>
- Nestle, M. (2007). Food Politics (10th Anniversary ed.). London: University of California Press.
- O'Neill, B., & Raggi, P. (2020). The ketogenic diet: Pros and cons. *Atherosclerosis*, 292, 119-126. <https://doi.org/10.1016/j.atherosclerosis.2019.11.021>
- Panagiotakos, D. B., Chrysohoou C., & Pitsavos C. (2006). Association between the prevalence of obesity and adherence to the Mediterranean diet: the ATTICA study. *Nutrition*, 22(5), 449–456. <https://doi.org/10.1016/j.nut.2005.11.004>
- Poulimeneas, D., Anastasiou, C. A., Santos, I., Hill, J. O., Panagiotakos, D. B., & Yannakoulia, M. (2020). Exploring the relationship between the Mediterranean diet and weight loss maintenance: the MedWeight study. *The British journal of nutrition*, 124(8), 874–880. <https://doi.org/10.1017/S0007114520001798>
- Punj, G. N., & Staelin, R. (1983). A model of consumer information search behavior for new automobiles. *Journal of consumer research*, 9(4), 366-380. <https://doi.org/10.1086/208931>
- Rutar, T. (2019). For an integrative theory of social behaviour: Theorising with and beyond rational choice theory. *Journal for the Theory of Social Behaviour*, 49(3), 298-311. <https://doi.org/10.1111/jtsb.12204>
- Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and psychological measurement*, 55(5), 818-831. <https://doi.org/10.1177/0013164495055005017>
- Stankevich, A. (2017). Explaining the consumer decision-making process: Critical literature review. *Journal of International Business Research and Marketing*, 2(6). <http://dx.doi.org/10.18775/jibrm.1849-8558.2015.26.3001>

Acknowledgements

This project was funded by the Samuel A. & Sharon Y. Nickols Endowment.