

RESEARCH BRIEF • OCTOBER 2023

Time Preferences and Food Choice

Based on BFI Working Paper No. 2023-128, "[Time Preferences and Food Choice](#)," Alex Imas, Chicago Booth; Andy Brownback, University of Arkansas; and Michael A. Kuhn, University of Oregon

Present-focus and patience are highly predictive of food choice, suggesting that important aspects of nutrition are driven by time preferences.

Go to the gym, quit smoking, eat healthy. We all have a sense of things we could be doing today to improve our lives later. So why don't we? Behavioral economics offers a framework for studying how people choose between options with consequences that occur at different points in time. In this paper, the authors apply these concepts to the issue of diet quality to better understand the motivations behind food-choice decisions.

This is more than simply an intellectual exercise. Diet quality is a key determinant of health, and consuming fruits and vegetables has been found to have many benefits, including reducing the risk of cancer and cardiovascular disease. Furthermore, given that low-income people tend to consume less healthy diets, studying this question is important not only for improving overall population health, but for addressing issues of inequality and opportunity as well.

The authors study this question by administering a field experiment involving low-income shoppers from across the country. They randomize participating shoppers into three groups: a control group, which receives no shopping subsidies, and

two subsidy groups, one of which receives a 30% off subsidy that can be used on healthy foods, and one of which receives a 30% off subsidy that can be used on either healthy or unhealthy foods, per the shopper's discretion.

Each shopper completes up to four shopping trips at a time and place of their choosing and provides the authors with grocery receipts as well as two sets of food consumption diaries. The authors also collect characteristics about the shoppers, including their income, household size, and SNAP participation, as well as about their time preferences (e.g., the extent to which they delay gratification versus prefer an immediate reward).

The authors use the data from their experiment to study the relationship between peoples' patience (their willingness to wait for delayed rewards) or present-focus (their tendency to place a disproportionate value on immediate rewards) and their nutritional choices. They find the following:

- Shoppers whose survey results indicate that they are more patient tend to buy and consume a greater amount and larger share of

fruits and vegetables, plan their consumption better—displaying fruit and vegetable consumption that is more consistent with their spending, and are more likely to select healthy over unhealthy subsidies.

- On the other hand, shoppers whose survey results indicate a greater present-focus tend to purchase and consume fewer fruits and vegetables, have difficulty planning their consumption—under-consuming fruits and vegetables relative to their spending, and are less likely to select healthy subsidies over unhealthy ones, though they do increase their spending on healthy foods more in response to being given a healthy subsidy.

This research is the first to find clear associations between measures of time preferences and real-world food choices such as grocery purchases and at-home consumption. As policymakers continue to experiment with nutrition assistance policies and specifically consider subsidizing healthy foods, it will be important that they are able to anticipate the necessary conditions for success. Collecting measures of time preferences will allow policymakers to better anticipate potential hurdles such as impatience or present focus. Moreover, such measures will open the door to better targeting these programs as they are deployed. For example, these results may be relevant for forecasting the potentially heterogeneous effects of increases in SNAP benefits on the food choices of individuals.

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